SONY

3-754-217-11(1)

Digital Audio Tape Deck

Operating Instructions page 2

DAT
Digital Audio Tape

DTC-P7

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WARNING

To prevent the fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:

Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond to the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.
Do not connect either wire to the earth terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured green or green-and-yellow.

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Digital Audio Tape

DAT (Digital Audio Tape) is a new recording system which digitalizes the audio signal and records it on a DAT cassette tape.

DAT records the audio signal by converting the analog sound into a digital signal. This converting system is called the PCM (Pulse Code Modulation), and its accurate processing of the audio signal allows recording/playback with lower wow and flutter, wider dynamic range, lower distortion rate, and superb signal-to-noise ratio.

In addition, various control codes calls sub codes can be written on the DAT cassette separately from the audio signal. They are written for a variety of convenient playback/tape editing operations, and except for the absolute time, can be rewritten after audio signal recording has been completed.

Precautions

Safety

- Before operating the unit, be sure that the operating voltage of your unit is identical with that of your local power supply.
- This unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet even if the unit itself has been turned off.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull the cord itself.

Operation

Before making program source connections, be sure to unplug the unit.

Installation

- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Do not place anything on the top of the cabinet. The top ventilation holes must be unobstructed for the proper operation of the unit and to prolong the life of its components.

Moisture Condensation

If the unit is brought directly from a cold to a warm location, moisture may condense inside the unit. In this condition, the tape may adhere to the head drum and be damaged, or the unit may not operate correctly. Always remove the cassette when the unit will not be used.

If moisture is present...
- Function controls will not operate.
- All operations will stop.

When the CAUTION indicator lights and the unit will not operate
Leave the unit turned on for about an hour.

NOTE
When closing the cassette compartment, do not push the cassette lid forcibly by hand, but perform with the OPEN/CLOSE button.

If you have any question or problem concerning your unit, please consult your nearest Sony dealer.

How to Use This Manual

This manual is very helpful when you operate this unit. So before you use this unit, please read this manual carefully.

The first section "Before using the DAT deck" describes about the information necessary before operating this unit, such as, the connection, identification of parts and controls and clock setting, etc.
The second section " Recording" describes not only about the recording procedure but also about the information which is very helpful for recording.
The third section "Writing sub codes" describes about the writing and erasing of various sub codes such as start ID, skip ID, end ID, program number. It also discusses about absolute time, program time and date function which are very convenient for recording and playback.
The fourth section "Playback" describes about the basic playback operation and then about the various playback operation by using sub codes.
The last section "Additional information" describes about the maintenance of this unit, troubleshooting and the specifications.

Overview of the Digital Audio Tape Deck

Serial Copy Management System

This unit utilizes the serial copy management system that permits digital-to-digital recording for one generation. You can record CD sound or other digital formats through a digital-to-digital connection. (See page 44.)

Date Function Automatically Memories the Recording Date and Time

The year, month, day, day of the week, hour, minute and second are automatically memorized in the subcode area during recording, so that during playback you can display this data to check when the tape was recorded. This function is especially convenient when recording live performances, etc.

Three Sampling Frequencies

Recording/playback can be done with three sampling frequencies (48 kHz, 44.1 kHz and 32 kHz).
48 kHz: For analog and digital input signals in a standard mode.
44.1 kHz: For compact disc and pre-recorded DAT tape.
32 kHz: For analog input signals in a long-play mode.

Long Play Mode

This unit can operate in a long-play mode. Analog input signals can be recorded or playback for up to four consecutive hours when the DT-120 DAT cassette tape is used. The sampling frequency will be 32 kHz in the long-play mode.

Visible Cassette Loading

You can view the tape operation through the lid of the cassette compartment. Due to a revolutionary new transport mechanism, cassette loading time has been significantly reduced.

Excellent Sound Quality

- **1-bit A/D converter**
  For the A/D converter section which converts analog input signals to digital signals, the unit employs a 1-bit A/D converter which theoretically generates no zero-cross distortion for a clear, elegant sound quality.
- **Pulse D/A converter**
  Superior playback performance is achieved with a 1-bit D/A converter.

Rich Variety of Subcode Information

This unit can record subcode information such as Start IDs, program numbers, Skip IDs, and absolute time data, enabling you to quickly locate tunes and display the playback time in the same manner as when playing compact discs.

Post Edit Recording of sub Codes

You can record or rewrite the following sub codes after the audio signal recording has been completed.
Start ID: Signifies the beginning of a selection.
Program number: Gives a number to the selection.
Skip ID: Signifies the beginning of a portion to be skipped.
End ID: Signifies the end position of recording/playback.
Since sub codes are written on the tape separately from audio signals, the audio signals are not affected.

5 x 7 dot Matrix Display

The 5 x 7 dot Matrix display window enables you to recognize an operation mode at a glance.

Enjoy this unit with other component system

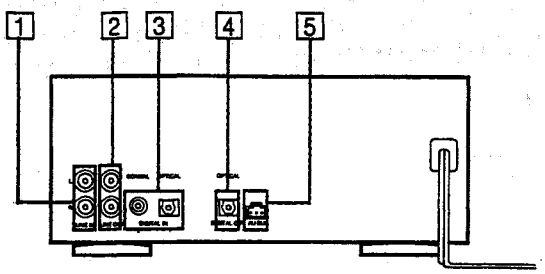
With the AU BUS jack, this unit can be connected to the other component system, and the auto function* and timer play will be available.

*The auto function automatically sets the system amplifier to the DAT mode when this unit enters playback mode.

Connections

This section describes about the analog connection, digital connection and the connection with the component system.

Rear Panel Jacks



1 LINE IN (line input) jacks (phono jack)
Connect to the recording outputs of an amplifier. Signals supplied by the amplifier can be recorded using the sampling frequency of 48 kHz in the standard play mode or 32 kHz in the long play mode.

2 LINE OUT (line output) jacks (phono jack)
Connect to the DAT or tape inputs of an amplifier. The playback signal of this deck will be output.

3 COAXIAL/OPTICAL DIGITAL IN (digital input) jacks (coaxial phono jack/optical jack)
Connect to the digital outputs of an amplifier having a built-in D/A converter or other digital source, such as a CD player for digital-to-digital recording.
When the OPTICAL DIGITAL IN jack is connected, set the INPUT selector to the DIGITAL 1 position and when the COAXIAL DIGITAL IN jack is connected, set the INPUT selector to the DIGITAL 2 position.

4 OPTICAL DIGITAL OUT (digital output) jack (optical jack)
Connect to the digital inputs of an amplifier having a built-in D/A converter or another DAT deck, for playback of a DAT cassette or digital-to-digital recording.

5 AU BUS jack
Connect to the AU BUS jack of a Sony amplifier or receiver to perform the system control.

Notes on connection
- Use the connecting cords specified in the illustrations.
- Turn off the power for all equipments before making connections.
- Be sure to insert the plugs firmly into the jacks. Loose connections may cause hum and noise. When unplugging, grasp the plug and not the cord.

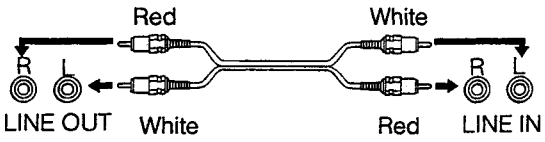
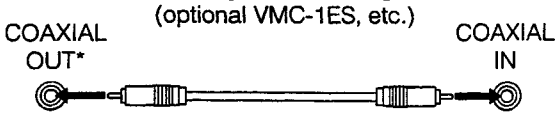
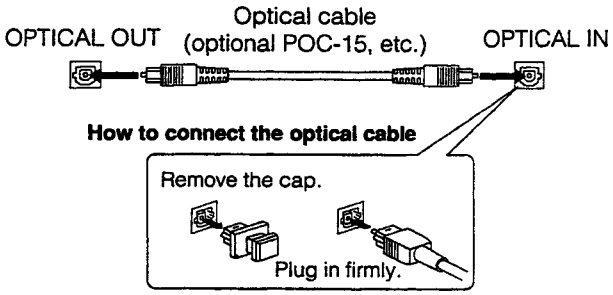
Notes on the optical cable
- Do not bend the cord. When the cord is not used, curl it with a diameter of more than 15 cm (5 $^{7}/_{8}$ inches).
- Do not use it under high temperatures.
- When the optical cable is not connected, cover the OPTICAL IN/OUT jacks with the supplied caps.

Note on sound signals
When connecting an optical cable to the DIGITAL IN/DIGITAL OUT jacks, sound signals (L/R) are transmitted together through the cable.

Connecting Cords

There are following three types of connecting jacks at the rear of the deck. Each type of jack requires a different type of connecting cord.

- For the AU BUS connections, see page 10 and 11.

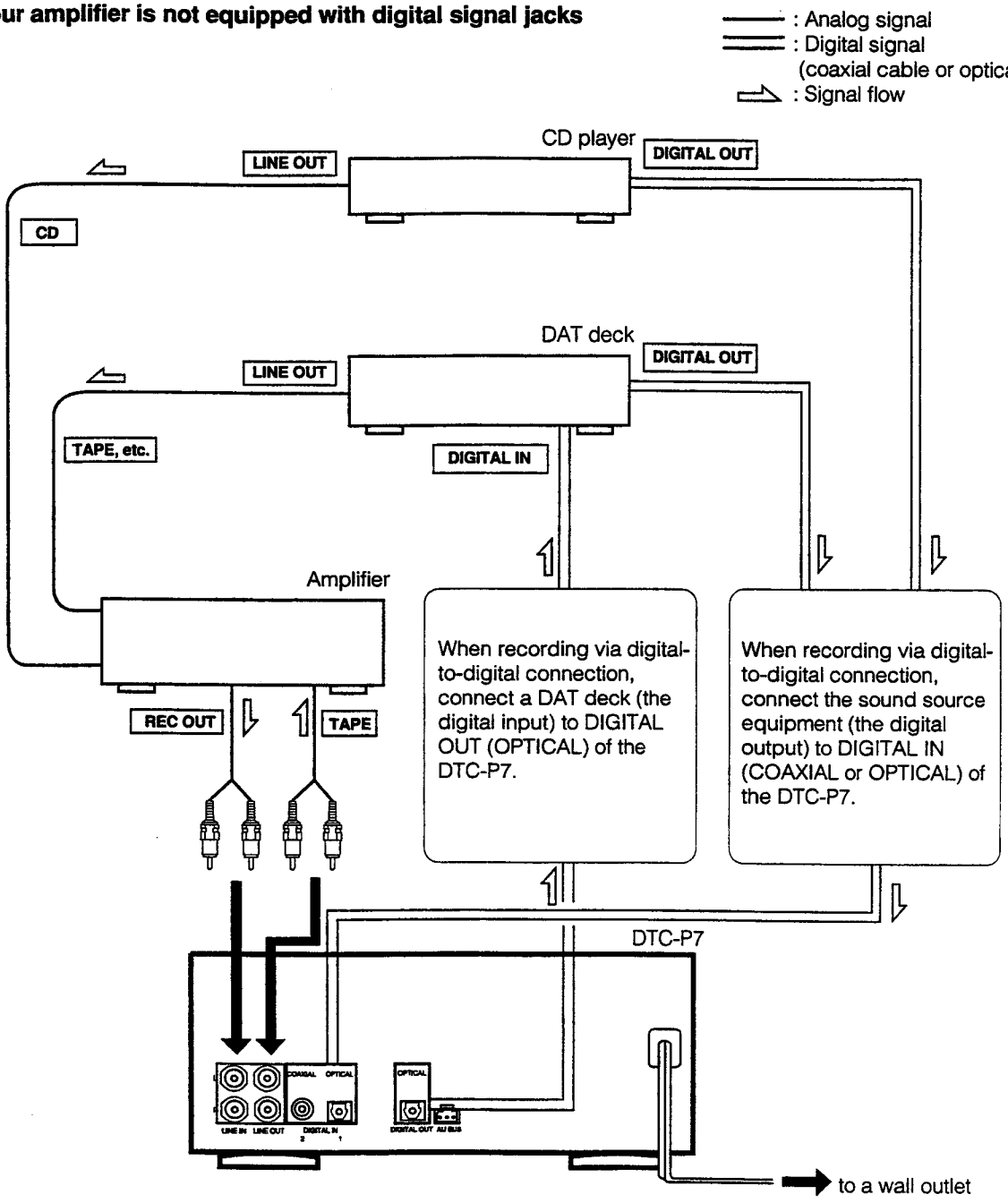
Jack	Required cord
LINE IN/OUT (analog input/output) jacks	Audio signal connecting cord (supplied, or optional RK-C77 etc.) 
COAXIAL IN/OUT (digital input/output) jacks	Coaxial digital connecting cord (optional VMC-1ES, etc.) 
OPTICAL IN/OUT (optical transmission digital input/output) jacks	

* This unit is not equipped with the COAXIAL OUT jack.

Connections

Connection Examples

If your amplifier is not equipped with digital signal jacks

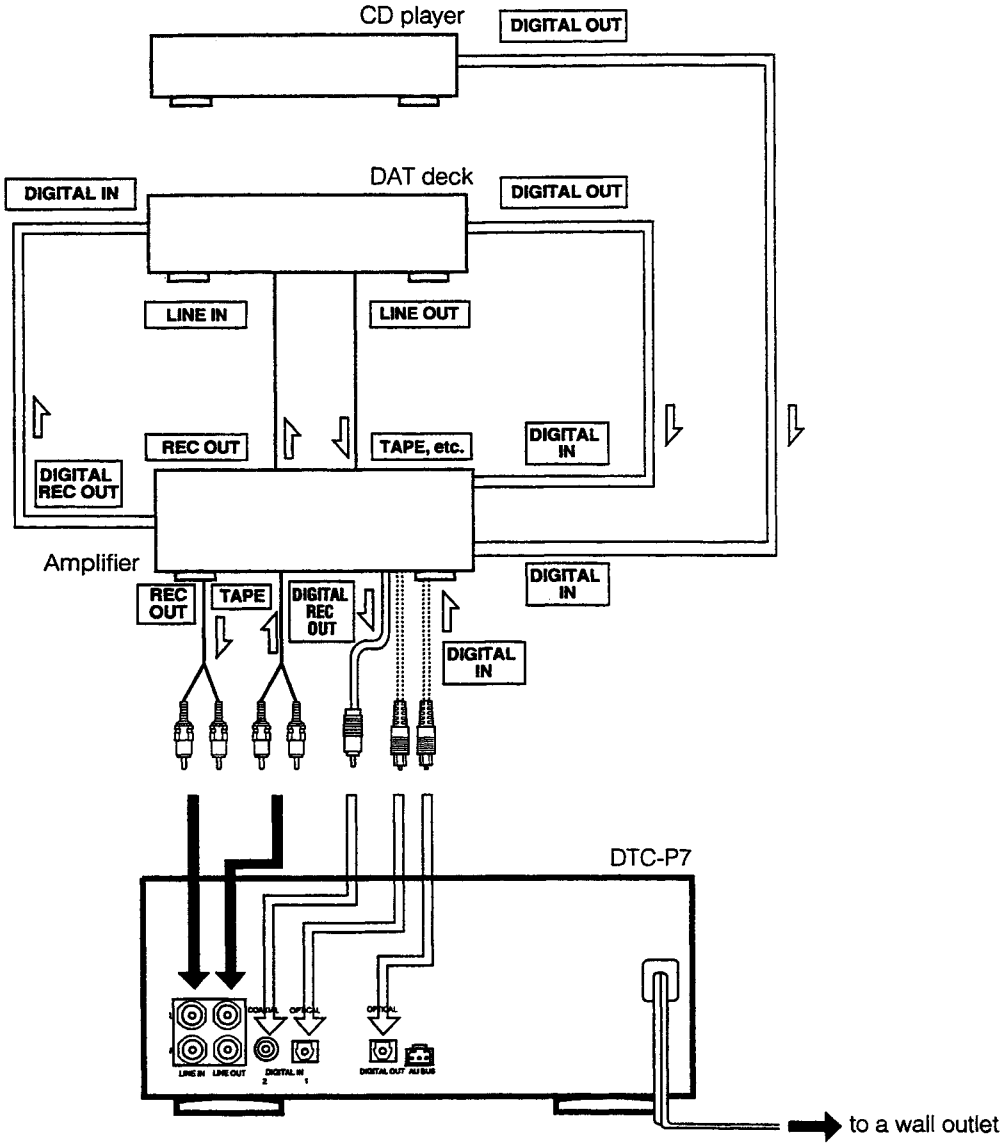


When connecting a microphone
Connect the analog output of a stereo microphone amplifier to LINE IN of the DTC-P7.

Note
If "PROH" (copy prohibit) appears in the display window, recording via digital-to-digital connection cannot be performed.
In this case, connect the sound source equipment using LINE IN and OUT jacks.

If your amplifier is equipped with digital signal jacks

: Analog signal
: Digital signal
(coaxial cord or optical cable)
: Signal flow



Note

If "PROH" (copy prohibit) appears in the display window, recording via digital-to-digital connection cannot be performed.
In this case, connect the sound source equipment using LINE IN and OUT jacks.

Connections

Connecting to the other component system equipped with the AU BUS jack

By connecting this unit to the component equipped with the AU BUS jack, you can operate this unit as a component system.

The following component system can be connected to this unit:

- The component system equipped with the analog signal jacks
  - MHC-3600
  - MHC-2600
- The component system equipped with the digital signal jacks
  - MHC-6600
  - MHC-5600

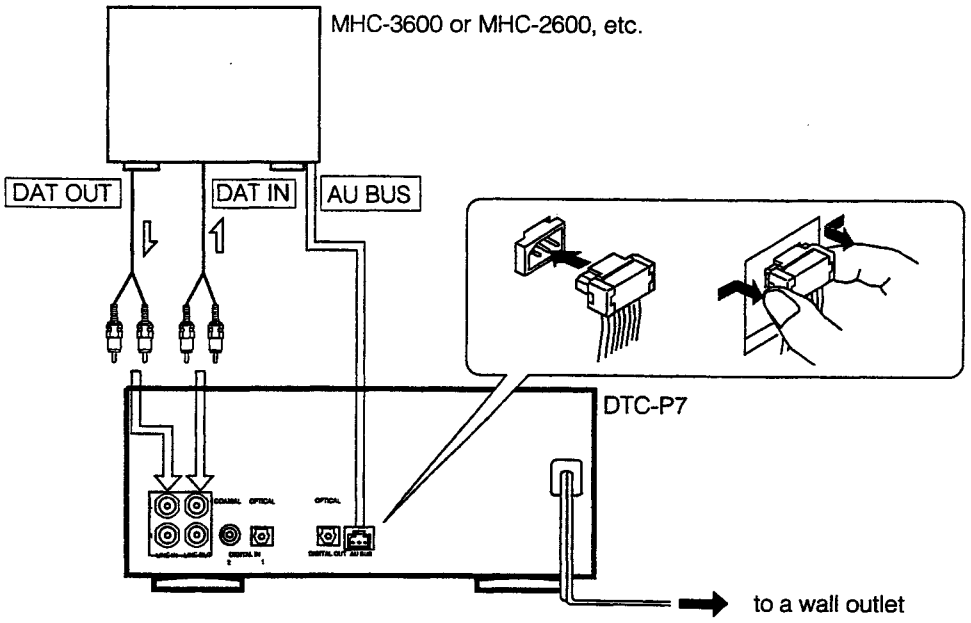
The following functions are available by connecting this unit to the component system equipped with the AU BUS jack:

- The power is turned on and off depending on the POWER SYSTEM switch of the component system.
- With the timer function of the component system, the timer playback and timer recording can be available.
- When this unit enters playback mode, the component system automatically selects the DAT mode.

Note

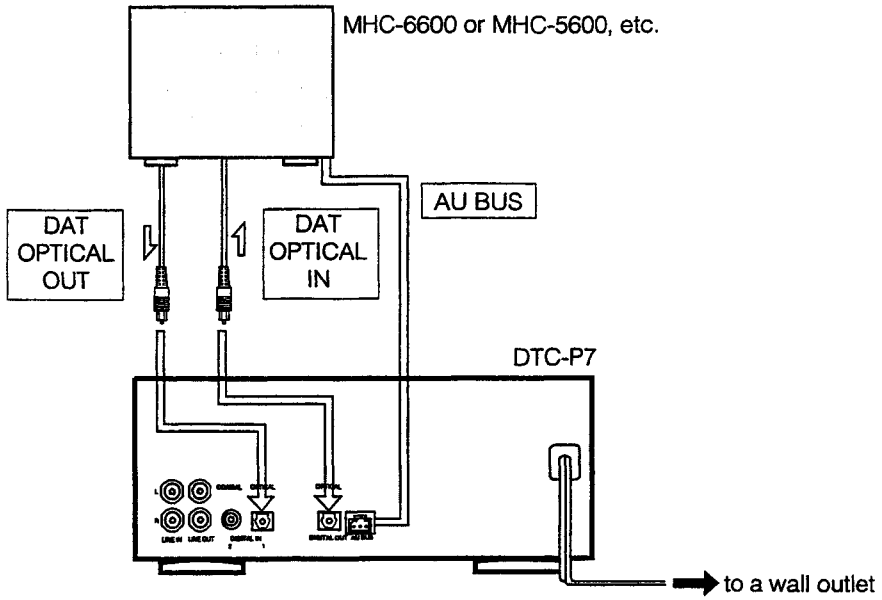
When this unit is connected to the component system with the AU BUS jack, point the remote commander to the remote sensor on the component system. When the AC power cord of the component system is disconnected, point the remote commander to the remote sensor of this unit.

If your component system is equipped with analog signal jacks



- The MHC-3600/MHC-2600 is equipped with the optical out jack, so when the OPTICAL IN jack of this unit is connected to the optical out jack of the MHC-3600/MHC-2600, the digital recording of the CD program can be available.

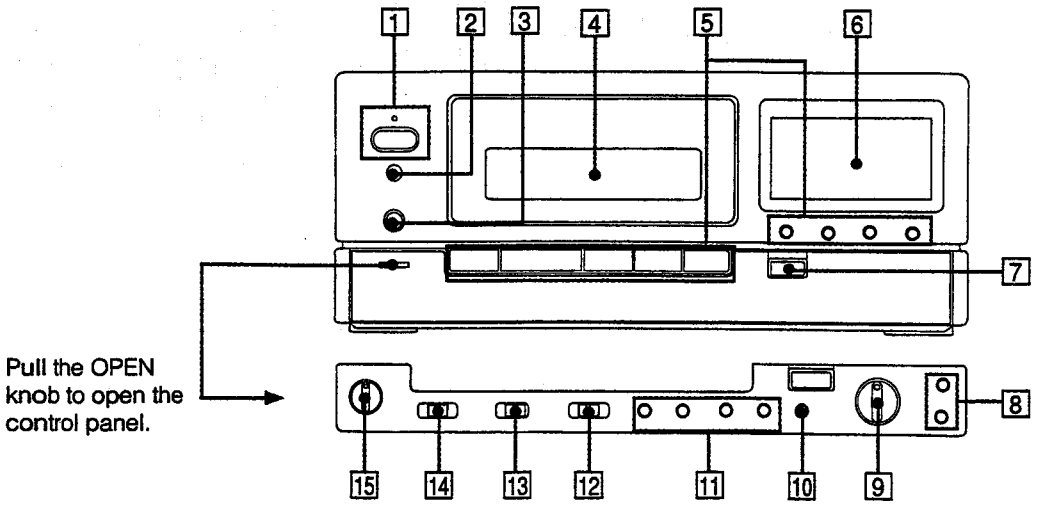
If your component system is equipped with digital signal jacks



Identifying Parts and Controls

This section describes the names and functions of each parts of this unit. Before operating this unit, please read carefully.

Front Panel/Remote Commander



1 **POWER switch and ON/STANDBY indicator**
Turns the power on and off. When the power is off, the STANDBY indicator lights up.

2 **Remote sensor**
Receives the signal from the remote commander.

3 **HEADPHONES jack (Stereo minijack)**
Insert the headphones plug to this jack.

4 **Cassette compartment**
Insert a cassette with the window side up and the safety tab facing you.

5 **Tape operating buttons**
■ **(stop):** Press to stop recording or playback.
▷ **(play)**: Press to play back the tape.
IIPAUSE (pause): Press to stop for a moment during recording or playback. To restart recording or playback, press this button again or press the ▷ button. If the unit is left in the pause mode for about 10 minutes, it will automatically be released and the deck will enter the stop mode. To restart recording or playback from the stop mode, press the ●REC or ▷ button respectively.
OMUTE (record muting): Press to insert a sound-muted portion (space).
●REC (recording): Press to enter the record-pause mode. To start recording, press the IIPAUSE or ▷ button.
I◁◁/▷▷I (AMS): Press to locate the beginning of the selection during playback.
◀◀/▶▶ (rewind/review, fast-forward/cue): In the stop mode, press to rewind/fast-forward the tape. During playback, press to rewind or fast-forward the tape while listening to the sound.

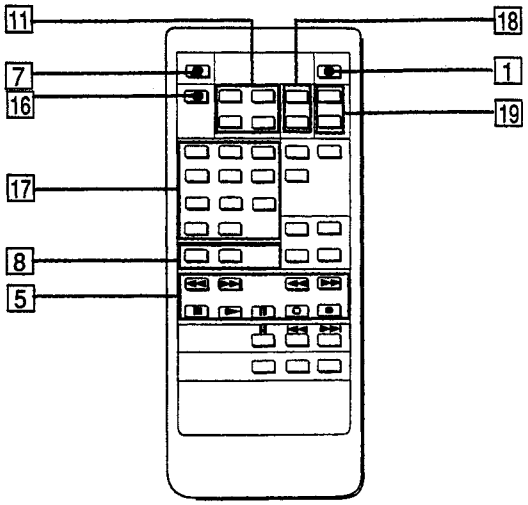
6 **Display window**

7 **▲OPEN/CLOSE button**
Press to open or close the cassette compartment.

8 **COUNTER buttons**
MODE: Selects the counter display in the display window among the linear counter (tape running time), absolute time, elapsed time of the selection, and total remaining time of tape. Each time you press the button, the display changes sequentially.
RESET: Resets the linear counter to "0M 00S".

9 **REC LEVEL (recording level) control**
Adjust the recording level for the analog input signals. When recording digital signals, it is not necessary to adjust the recording level.

10 **CLOCK SET button**
Press to adjust the time of the clock built in this unit. In this mode, the ◀◀ and ▶▶ buttons function as the + and – buttons respectively.



11 START ID buttons

AUTO: Press to turn on and off the AUTO indicator. When the AUTO indicator is lit, the start ID will automatically be written during recording. When the AUTO indicator is not lit, press the START ID WRITE button at the point where you want to write a start ID.

RENUMBER: Press to renumber all programs on the tape. When only the start IDs are written, pressing this button will insert the proper program numbers beginning with "1". The tape will rewind and start from the beginning to accomplish this function.

WRITE: Press to write the start ID at the desired point during recording or playback.

ERASE: Press to erase a start ID. When a start ID and a program number are written on the tape, both codes are simultaneously erased by pressing this button.

12 INPUT selector

Set according to the signal to be recorded.

ANALOG: For recording from the equipment connected to the LINE IN jacks.

DIGITAL 1/DIGITAL 2: For recording from the eqipment connected to the DIGITAL IN jack.

13 REC MODE selector

Normally set to the STANDARD position.

When this selector is set to the LONG position, you can record analog input signals or digital signals with 32 kHz in the longplay mode.

14 TIMER switch

Normally set to the OFF position. When recording or playing back at the desired time using a commercially available audio timer or the timer function of the component system, set to the REC position or the PLAY position respectively.

15 PHONE LEVEL control

The PHONE LEVEL control adjusts the headphones volume level.

16 DISPLAY MODE button

Changes the display mode. (Refer to page 16.)

17 Music select buttons

Numeric buttons (0–9): Designate the desired program number to be played back before starting playback. Designate the desired number in the record-pause mode, the program number is written consecutively from the designated number.

CLEAR: Use to cancel the program number which has been mistakenly entered.

18 SKIP ID buttons

WRITE: Press at the beginning of the portion you may wish to skip later. A skip ID will be written from the point where you pressed this button.

ERASE: Press to erase the nearest skip ID which is before the current position.

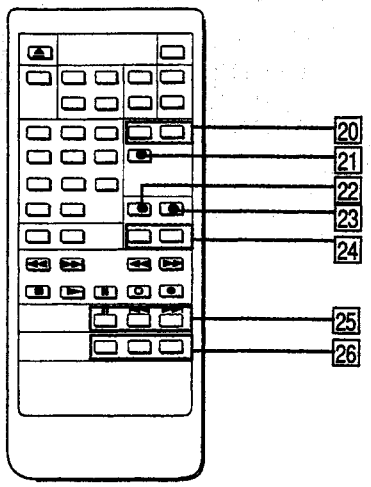
19 END ID buttons

WRITE: Press to write the ID signifying the end of playback or recording.

ERASE: Press to erase the end ID.

Identifying Parts and Controls

Front Panel/Remote Commander



20 RMS play buttons

ENTER: To program the selections in a desired order, press this button after pressing the numeric buttons.

CHECK: Press to check the programmed contents.

21 REPEAT 1/ALL button

Press to play a desired portion repeatedly. Each time you press the button, the indicatior changes as follows:
REPEAT 1 → REPEAT ALL → off

22 MUSIC SCAN button

Use this feature to listen to the beginning of each selection successively.

23 SKIP PLAY button

Press to activate the skip ID code function. The portion of the tape previously marked will be skipped.

24 DATE buttons

RECORDED: Press to display the recording day of the tape being played.

PRESENT: Press to display the current time.
Each time the RECORDED or PRESENT button is pressed, day, month and year display, the day of the week display or hour, minute and second display is switched sequencially.

25 CD operation buttons

Operative only for the Sony CD player equipped with a remote commander.

II (pause): Press this button twice to start playback. To enter the pause mode, press this button once.

⏮/⏭ (AMS): Press to locate the desired selection on the Compact Disc during playback or in the stop mode.

26 CD SYNCHRO (CD synchronized recording) buttons

(The playback of the Sony CD player equipped with a remote commander and the recording of the DAT deck can be performed simultaneously.)

STANDBY: Press to set the unit to the record-standby mode.

START: Press to start recording of the DAT deck and then playback of the CD player.

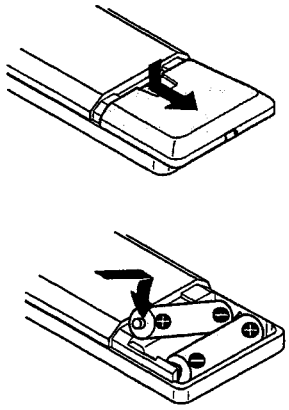
STOP: Press to stop the DAT deck recording and the CD player playback.

Remote Commander Operation

Almost of all functions of this unit can be performed with the remote commander.
However, the following operations can not be performed with the remote commander. Use the corresponding buttons on the front panel.

- Selecting digital/analog input source
- Adjusting the recording level
- Adjusting the headphones level
- Setting the timer recording/playback
- Setting the date and time
- Selecting the record mode (standard or long)

Installing Batteries



Insert two size AA (R6) batteries with correct polarity, and close the lid.

Notes on remote control

- Do not expose the remote sensor on the deck to strong light such as direct sunlight, lighting apparatus, etc.
- Do not place any obstructions between the remote commander and the remote sensor, or else operations will not be performed correctly.
- The controllable range is limited. Point the remote commander directly at the remote sensor on the deck.
- When remote control operation distance becomes shorter, the batteries are weak. Replace both batteries with new ones.
- When this unit is connected to the component system with the AU BUS cord and the power of the component system is turned on or in standby mode, only the remote sensor on the component system can function.
  So point the remote commander to the remote sensor on the component system.

To avoid battery leakage

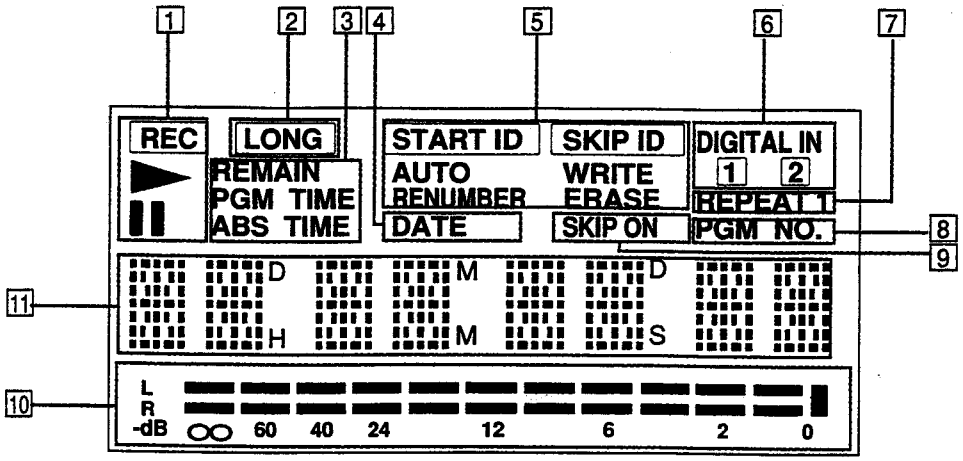
When the commander will not be used for a long period of time, remove the batteries to avoid damage caused by battery leakage and corrosion.

Battery life

About half a year of normal operation can be expected when using the Sony SUM-3 (NS) batteries.

Identifying Parts and Controls

Display Window



When the power is turned on, the display window is also turned on. However the peak level meter display can be turned on and off alternatively during recording or playback each time the DISPLAY MODE button is pressed.

1 Tape operation indicators

REC: Lights during recording or in the record-pause mode.

▷: Lights during recording or playback. It also lights in the record-pause mode or in the play-pause mode.

II: Lights in the record-pause mode or in the play-pause mode.

2 LONG play mode indicator

Lights when recording or playback is being performed in the long play mode.

3 REMAIN (remaining time): Lights when the counter shows the remaining time of the tape.

PGM TIME (program time): Lights when the counter shows the elapsed time of the current selection.

ABS TIME (absolute time) indicator: Lights when the counter shows the elapsed time from the beginning of the tape.

4 DATE indicator

Lights when pressing the RECORDED button to display the recording day of the tape being played. Flashes when pressing the PRESENT button to display the current time.

5 ID code indicators

START ID indicator: Flashes when writing (for 9 or 18 seconds) or erasing a start ID code, and lights when the start ID is detected during playback.

SKIP ID indicator: Lights when writing (for 1 or 2 seconds), erasing a skip ID code or when the skip ID is detected during playback.

AUTO: Lights when the AUTO button is pressed to write the start ID automatically.

RENUMBER: Lights when the RENUMBER button is pressed to renumber the program numbers or when shifting the start ID and program number position.

WRITE: Lights or flashes when writing the start ID, skip ID or end ID.

ERASE: Lights or flashes when erasing the start ID, skip ID or end ID.

AUTO RENUMBER: Lights when renumbering program numbers automatically.

6 DIGITAL IN indicator

The DIGITAL IN 1 or DIGITAL IN 2 indicator lights according to the position of the INPUT selector. No indicator lights when the INPUT selector is set to the ANALOG position.

7 REPEAT indicators

REPEAT 1: Lights when a desired selection is played back repeatedly.

REPEAT: Lights when all the selections are played back repeatedly.

8 PGM NO. indicator

Shows the program number of the selection being played. When programming the desired selection in the RMS operation (page 40), the display shows the step number of the programmed selection.

9 SKIP ON indicator

When this indicator is lit during playback, the portion marked by the skip ID is skipped and playback continues from the next start ID.

10 Peak level meters

Indicate the level of the audio signal being recorded during recording, and the peak values of the audio signal recorded on the tape during playback.
When the rightmost indicator lights, the peak level is over.

11 Counter indicator

Indicates the tape running time, absolute time, elapsed time of the current selection, remaining time or recording day. Each time the COUNTER MODE button is pressed, the display is changed.

The following indicators are also displayed at this area.

RMS (Random Music Sensor)
When programming the desired selections in the RMS operation (page 40), the display shows the program contents.

M. (Music) SCAN
Flashes when searching for the beginning of each selection in music search mode.

M. S (Music Scan) OFF
Displayed momentarily and then goes off when the music scan mode is cancelled.

SKIP ON
Displayed when the SKIP PLAY button is pressed.

SKIP OFF
Displayed when the SKIP PLAY mode is cancelled.

REPEAT 1/REPEAT
REPEAT1: Displayed when a selection is played repeatedly.
REPEAT: Displayed when all selections are played repeatedly.

Sampling frequency (48 kHz, 44.1 kHz or 32 kHz)
Shows the corresponding sampling frequency while the ▷ button is pressed during playback or recording.

CAUTION
Displayed when moisture condensation occurs. If this happens, the deck stops functioning automatically. (page 4.)

PROH (Prohibit)
Displayed when recording the digital signal with the copy prohibit code. In this case, record with the LINE IN jacks.

Clock Setting

This unit employs a built-in clock to keep track of the current date and time. Once you set the date and time, this information will be recorded on the tape along with the audio signal during recording. This function is very convenient because it allows you to check when the tape was recorded when playing the tape later.

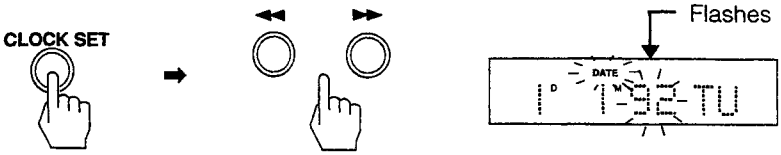
Setting the date and time

Example: Setting the clock to 10:30:00 AM, July 4, 1992 (Saturday)

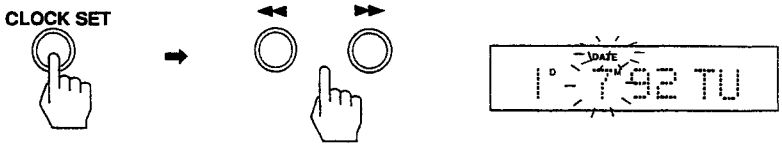
Setting the day

1 Display the date.

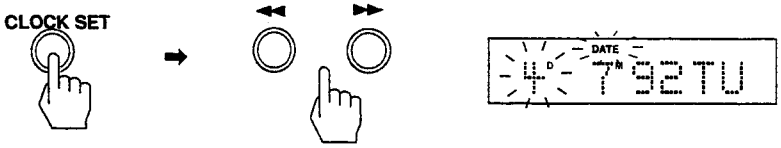
2 Set the year.



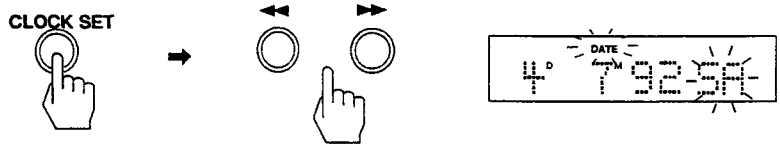
3 Set the month.



4 Set the day.



5 Set the day of the week.

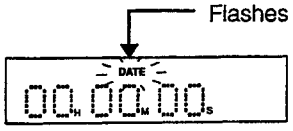


6 Complete the setting procedure.

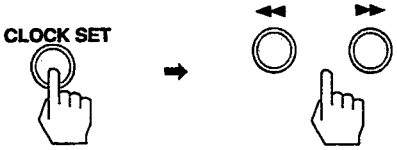
Setting the time

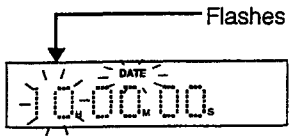
1 Display the time.

(Remote commander)

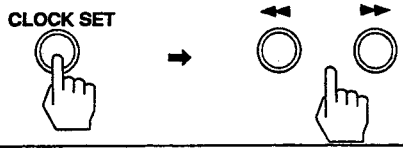


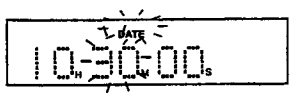
2 Set the hour.



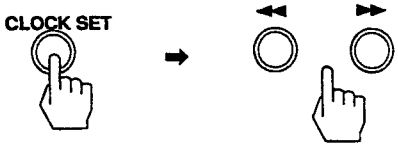


3 Set the minutes.

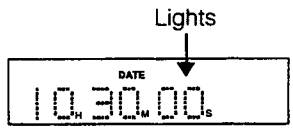




4 Set the seconds to 0.



5 Start the clock simultaneously with the signal from a timecast (telephone, etc.).



To confirm the date or time

Press the PRESENT button to display the date, the day of the week or time. When pressing the PRESENT button once, the day and the day of the week are displayed, when pressing it twice, the time is displayed. To return to the original counter display, press the COUNTER MODE button.

Time display

The time is displayed in 24-hour format.
Midnight and noon are displayed as follows:
Midnight: 0:00
Noon: 12:00

Built-in clock

This unit's built-in clock operates using a quartz oscillator, and time variations caused by changes in temperature, etc., may accumulate. For precise recording of hour, minute, and second data by the built-in date function, it is recommended that you set the clock once a week.

Precautions when setting the clock

- Set the clock while the tape is stopped.
- Although this unit's clock automatically adjusts for leap years and long and short months, do not enter a date which does not exist.

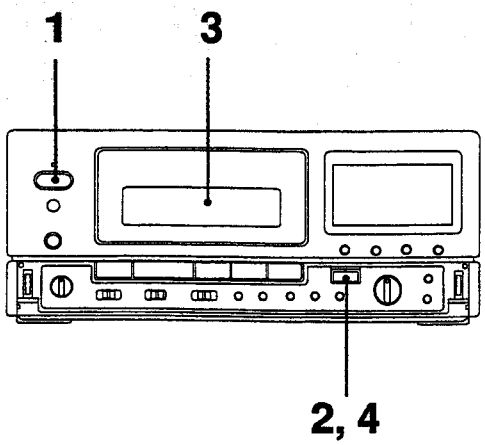
The day of the week is displayed as follows.

Sunday	SU
Monday	MO
Tuesday	TU
Wednesday	WE
Thursday	TH
Friday	FR
Saturday	SA

Note

This unit uses a back-up battery to keep the clock running when the power is turned off. The life of the battery under normal use is approximately five years. When the battery starts to run down, the clock will stop operating normally. When this occurs, have the battery replaced at your dealer or nearest Sony Service Center (a battery replacement fee is required).

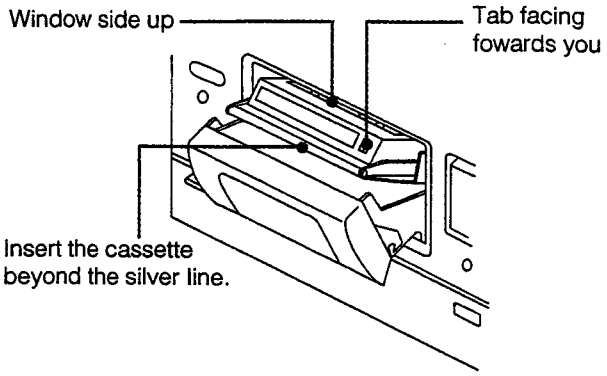
Cassette Loading



1 Turn on the power.

2 Press ▲OPEN/CLOSE.
The OPEN indicator appears on the display.

3 Insert the cassette.



- Do not insert the cassette upside down.

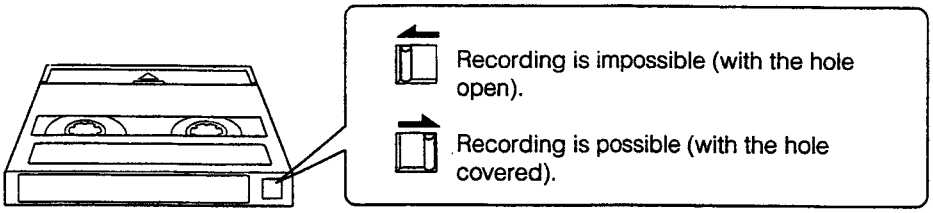
4 Press ▲OPEN/CLOSE.
The CLOSE indicator appears on the display.

To remove the cassette
Press ▲OPEN/CLOSE.

On a digital audio tape
Only the digital audio tape made especially for DAT deck is required.
Unlike a conventional analog audio cassette tape, a digital audio tape can be used only one side.

- Digital audio tape is designed to avoid a dust. Do not open the inside of the tape.
- The hole at the back of a tape is a detector slot. Do not cover the slot.

To prevent accidental erasure
When a recording is made, any previously recorded signal will be erased automatically. To prevent accidental erasure, set the safety tab to the position shown in the illustration. With the hole open, rewriting sub codes cannot be performed.



Notes

- When you turn on the power, the ▮▮ indicator flashes for a moment in the display window. During this period, no buttons other than the ▲OPEN/CLOSE and ▷ buttons are operative. Wait until blinking stops and the ▮▮ indicator goes off.
- When inserting the cassette, do not push the cassette compartment closed. Be sure to use the ▲OPEN/CLOSE button.

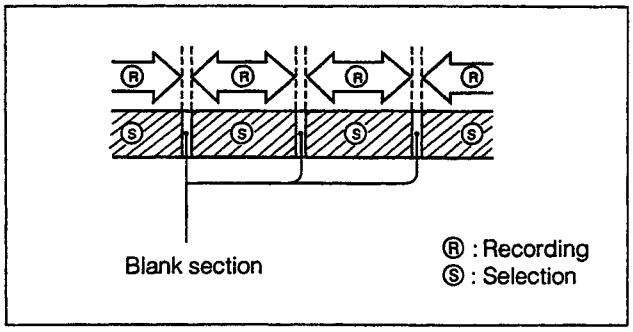
On the sampling frequency
While the ▷ button is pressed during playback or recording, the sampling frequency (48 kHz, 44.1 kHz or 32 kHz) of the source program appears in the display window.

Before Recording

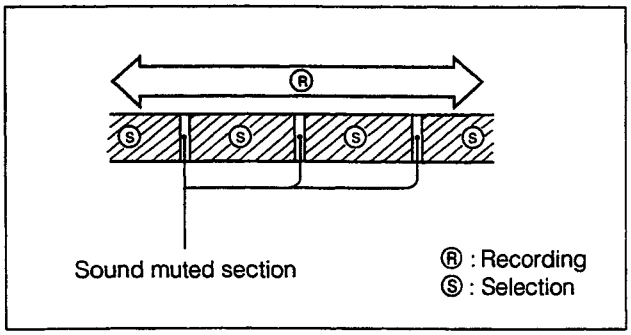
Blank Section and Sound Muted Portion

With conventional analog audio tapes, the tape portion on which no recording ever has been made and the portion on which a recording has been made but the sound is muted are treated the same, since no sound can be heard from these portions.
However, with DAT cassette, you should know that the two kinds of "no sound" portions must definitely be distinguished one from the other.

Blank section
Means the portion on which no recording ever has been applied.



Sound portion
Means the portion on which a recording has been applied but that no audible sound is recorded.



Important
When recording, be certain that no blank section is left on the tape. If blank sections remain on the tape, search operations using the AMS buttons, for example, may take quite a long time or the absolute time is not written correctly.

Difference between the blank section and sound-muted portion
When you record, a track format is constructed on the recorded area, even if the sound is muted during recording. On the blank section, since no recording is applied, there is no track format.

Absolute Time Codes

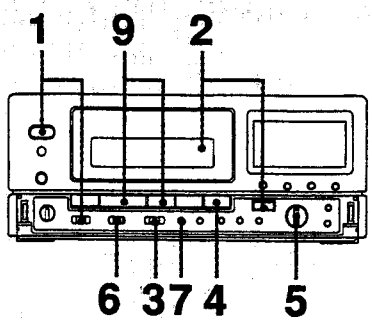
The absolute time indicates the position of the tape, giving the time elapsed from the beginning.The absolute time codes correctly written on the tape can be used in various convenient ways during playback.

Recording absolute time codes
When you record, the absolute time codes are also written automatically from the beginning of the tape.
Once the absolute time codes are recorded, it cannot be re-written. With the absolute time, you can check the elapsed time from the beginning of the tape or designate the position of the tape to be played back precisely.
Note, however, that the absolute time codes are not written if you start recording from the middle of blank section. No blank sections should be left on the tape when recording.

Tips for recording:
- To insert silence between selections, use the record muting function (page 25). Do not advance the tape with the ►► or ▷ button.
- To start recording from the middle of the tape, use the end search function (page 25) to locate the beginning of the blank section. This will avoid leaving a blank section.
- When loading the tape written the absolute time codes, the ABS TIME indicator is displayed.

If a blank section is left on the tape
If you start recording from the middle of a blank section or when the beginning of the new tape is advanced with the ►► or ▷ button, the absolute time codes are not recorded, since the DAT deck can no longer count the absolute time from the beginning of the tape.

Recording



1 **Make sure that the TIMER switch is set to the OFF position, and turn on the power.**

2 **Open the cassette compartment, insert a cassette and press the ▲OPEN/CLOSE button to load the cassette. (See page 20.)**
Then locate the position at which you want to start recording.
To start recording from the beginning of the tape, press the ◄◄ button. (Press the ◄◄ button again, the "TOP" indicator will appear at the beginning of the tape.)
To start from the middle of the tape, locate the point immediately before the blank section with the end search function. (page 25).

3 **Set the INPUT selector to ANALOG, DIGITAL 1 or DIGITAL 2 depending upon the connections of your sound source.**

4 **Press the ●REC button.**
REC, ▷ and ❚❚ indicators light on the display, and the deck enters the record-pause mode.
If the digital copy prohibit signal is written on the codes of the sound source, the PROH indicator appears in the display window and signifies that you cannot record that source with the digital-to-digital connection. In this case, use the analog-to-analog connection.

5 **When recording the analog input signal, adjust the recording level with the REC LEVEL control. (page 24.)**
No recording level adjustment is required when recording the digital input signal.

6 **To record in the long-play mode, set the REC MODE selector to the LONG position. (page 24.)**

7 **To write start ID automatically during recording, press the START ID AUTO button so that the AUTO indicator appears. (page 29.)**

8 **To designate the program number, press the desired numeric button on the remote commander. (page 31.)**
When recording from the beginning of the tape, the program number will be assigned automatically from 1.

9 **Press the ❚❚PAUSE or ▷ (play) button.**
The ❚❚ indicator goes off, and recording starts.

To insert sound muted portion at the beginning of the tape
Do not advance the tape with the ►► or ▷ button. This will leave a blank section at the beginning. Be sure to proceed with the record muting function. (page 25.)

To check the sampling frequency druing recording
Press the ▷ button. While the ▷ button is pressed, the sampling frequency being recorded is indicated on the display.

To stop recording
Press the ■ button.
To stop recording for a moment
Press the ❚❚PAUSE button.
When you press the ○MUTE button, the deck will also enter the record-pause mode.
To release pause and restart recording
Press the ❚❚PAUSE or ▷ button.
To remove the cassette
Press the ▲OPEN/CLOSE button.

If recording cannot be made
Check the following:
- The safety tab of the cassette is set to the record-inhibit position. (page 20.)
- No cassette is loaded.
- The INPUT selector is set to the incorrect position.
- Tape is fully rewound to the end.
- The output level of the playback equipment is too low.
- The digital copy prohibit signal is written in the codes of the sound source you want to record. ("PROH" appears in the display window.)
- The REC LEVEL control is set to the 0 position. (Only when recording the analog input signal.)

Note on the INPUT selector and the REC MODE selector
Do not change the position of these selectors after recording starts.

If the cassette is ejected after it has been loaded
Check to see if the cassette is inserted correctly. (page 20.)

When the tape is recorded to the end (Auto rewind function)
The tape is rewound to the beginning and stops automatically.
The auto rewind function is not applied when the TIMER switch is set to the REC position.

Accuracy of the electronic linear time counter
The linear time counter provided with this unit is not a clock. The time indicated by the counter may differ slightly from the actual recording/playback time.

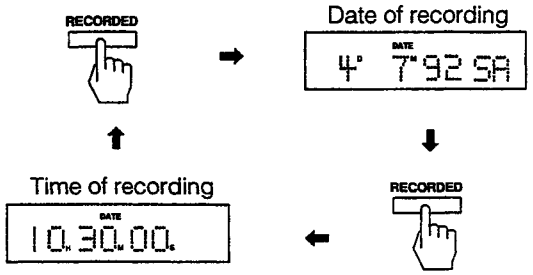
To Store the Recording Date and Time

Once the built-in clock is set, the day, the day of the week and time of recording will automatically be recorded on the tape along with the audio signal. When playing the tape back later, you can display this information to check when the tape was recorded.
To check the day, the day of the week and time being recorded, press the PRESENT button on the remote commander to display the current date and time.

Note
If you use another DAT deck to record subcodes (using the renumbering function, etc.) on a tape initially recorded on this unit, the recording date and time data may be erased from those sections of the tape.

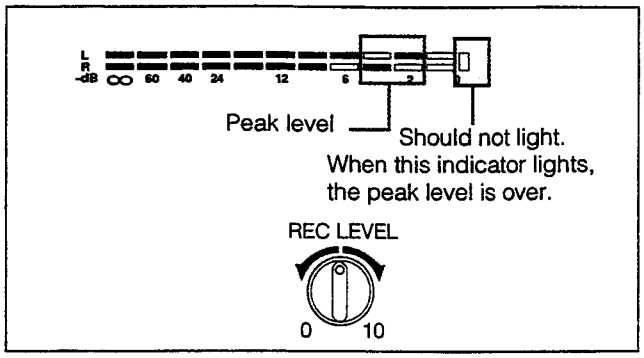
To Check the Recording Date and Time

During playback you can check the recording day, the day of the week and time which was recorded on the tape at the same time the audio signal was recorded. (No display will appear if the recording date and time are not recorded on the tape.)
To display the recorded date and time, press the RECORDED button on the remote commander. Each press of the button changes the display according to the following sequence.



To check the current date and time
Press the PRESENT button. The day, the day of the week and time are displayed in the same way as with the RECORDED button.

Recording level adjustment (for analog input signals only)
The peak level meters show the peak level of the analog input signal held momentarily.
Turn the REC LEVEL control so that the "rightmost" segment does not light, even at the highest level.
If the level exceeds 0 dB
The rightmost segment lights.
If "the rightmost segment" lights steadily, lower the recording level so that the peak level meter lights between –12 dB and 0 dB to avoid sound distortion.



If you keep adjusting the recording level with the unit in the record-pause mode
If the unit is left in the record-pause mode for more than 10 minutes, the record-pause mode will be released automatically, and the unit will enter the stop mode.
The levels of the input audio signals appear even in the stop mode, and you can continue to adjust the recording level. ("AD-DA" appears on the display.)
In the above case, press the ●REC button again to set the unit to record-pause mode.

If the unit is left in the record-pause mode for more than 10 minutes during digital recording
The record-pause mode will be released automatically, and the unit will enter the stop mode. ("DA" appears on the display.) In this case, press the ●REC to set the unit to record-pause mode.

If the cable is disconnected or the program source is intermitted, the digital input signal will be interrupted during digital recording
The DIGITAL IN 1 or DIGITAL IN 2 indicator flashes and the unit will enter record-pause mode. (For about 10 minutes) If the digital signal is input again in this period, the unit will enter recording mode automatically.

Long-play mode
According to the input signal, recording/playback in the long-play mode can be performed as follows.

Input signal	Recording mode (position of the REC MODE selector)	
	STANDARD	LONG
Analog input signal	standard play (48 kHz)	long play (32 kHz)
Digital input signal 32 kHz*	standard play (32 kHz)	long play (32 kHz)
Digital input signal 44.1 kHz, 48 kHz*	standard play (the same as input signal)	standard play (the same as input signal)

( ): sampling frequency

The digital input signal of 44.1 kHz or 48 kHz cannot be recorded/played back in the long play mode, even if the REC MODE selector is set to the LONG position.
* When analog input signal of 32 kHz or 48 kHz is recorded via digital-to-digital connection.

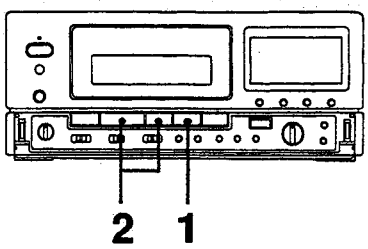
The longest recording period at each mode

Mode / Cassette	The longest recording period	
	standard	long
DT-120	2h	4h
DT-90	1h30m	3h
DT-60	1h	2h
DT-46	46m	1h32m

(h: hour, m: minute)

The timer counter in the long-play mode
Tape running time, absolute time and total remaining of the tape appears, based on those in the standard mode. To obtain the actual time, double each value.

Creating a Sound Muted Portion (Record Muting)



1 During recording or record-pause mode, press the OMUTE button where a sound muted portion is required.
The [REC] indicator flashes and the record muting is activated. After about 4 seconds, the [REC] indicator shows a steady light, and the II indicator lights. The deck enters the record-pause mode.

2 To resume recording, press the IIPAUSE or ▷ (play) button.
Recording resumes.

Using sound muted portion
If you intend to dub the DAT cassette onto an analog cassette tape, we recommend that you insert sound muted portions between selections on the DAT cassette.
This will ensure that the AMS function of the analog cassette deck works correctly for the recorded tape.

Note
With DAT deck, the AMS function is realized by using the start ID code. (page 28.)

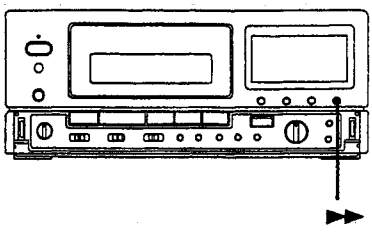
Caution
To place a space on a DAT cassette, you must not advance the tape with the ►► or ▷ button. If a space is created this way, no absolute time code will be recorded on the succeeding area, and you cannot check the elapsed time of the tape.

To create a sound muted portion of more than 4 seconds
Keep the OMUTE button pressed for as long as you want to make a recorded portion with no signals. After about 4 seconds, the [REC] indicator flashes rapidly. When you release the OMUTE button, the deck enters the record-pause mode.

To create a sound muted portion of less than 4 seconds
Press the OMUTE button, and then the IIPAUSE button while the REC indicator is flashing.

To start recording in the rec mute mode
Press the ●REC button while the [REC] indicator is flashing.

End Search



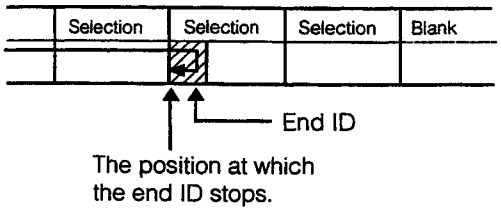
If the previous recording was applied to the middle of the tape, you must locate exactly the last point of the recorded area, and start the new recording from this point. This will prevent leaving a blank section on the tape.
If you want space between the last recording and the new recording, use the OMUTE button to mute the sound.

Press ►►.

The last point of the previous recording (the beginning of the blank section or the beginning of the end ID*) is located, and the tape stops. When the end ID is detected, the "EE" indicator lights at the PGM. NO display.

Note
If the point where you pressed the ►► button is blank, the end search operation will not function.

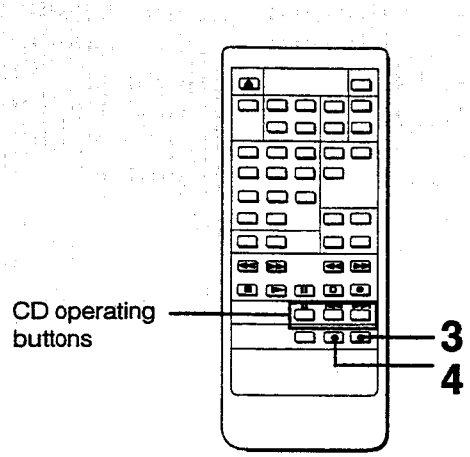
When the end ID is written before a blank section
* The end search operation stops at the beginning of this end ID as illustrated below.



Note on the duration of a blank section
The blank section must last for more than 9 seconds for the end search operation to function correctly.

Recording

CD Synchronized Recording



If a Sony compact disc player with a remote commander is available, you can start playback of the CD player and the recording of the DAT deck simultaneously, with the remote commander of the DAT deck.

Position the remote commander so that the signal reaches the remote sensor of both the DAT deck and the CD player.

To start recording

This function can be performed only with the remote commander.

1 Insert a cassette.

2 Insert the disc in the CD player.

3 Press the CD SYNCHRO STANDBY button on the remote commander of the DAT deck.
Make sure that the DAT deck enters the record-pause mode and the CD player enters the pause mode.

4 Press the CD SYNCHRO START button on the remote commander of the DAT deck.
Recording on the DAT deck starts, and about 1 second later, playback of the CD player starts.

To stop recording

Press the CD SYNCHRO STOP button on the remote commander of the DAT deck.

Notes

- To momentarily stop recording of the DAT deck and playback of the CD player simultaneously, press the ⏸PAUSE buttons on both the DAT deck and the CD player.
- With the CD synchronized recording, the recording of the DAT deck and the playback of the CD player should be started simultaneously. Therefore, to perform the CD synchronized recording, point the remote commander to the remote sensor and press the appropriate buttons correctly.

To control the CD player with the remote commander of the DAT deck

The following operations are possible:
Playback: Press the ⏸ button twice.
Pause: Press the ⏸ button once.
AMS:Press the ⏮ or ⏭ button.
When a desired selection is located using the above operation, you can start CD synchronized recording.

Sub Codes

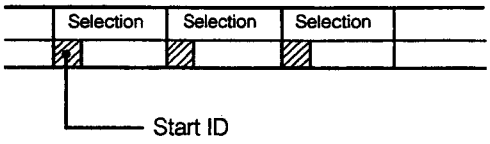
In addition to the ordinary audio signals, various control codes called sub codes can be recorded on the DAT cassette tapes to ease recording and reproducing operation.
A desired selection can be called up or time information can be displayed using the sub codes, for example.
The sub codes such as start ID, program number, skip ID, end ID and program time, absolute time and date function (recording the date) are available on this unit.

- Sub codes are written on the tape separately from the audio signals, so the audio signals are not affected.
- Sub codes, except the absolute time and the date function, can be rewritten after the audio signal recording has been completed.
  The recorded audio signals are not affected by the rewritten sub codes.
- When you record the tape with sub codes written onto a new tape via digital-to-digital connection, the sub codes to be written on the new tape are following:

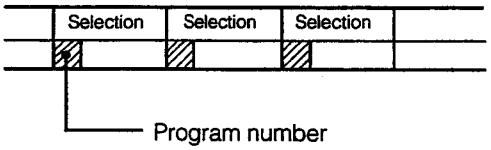
Start IDs	The same as the codes written on the original tape.
Skip IDs	The same as the codes written on the original tape.
Program Numbers	New ones will be written according to the DAT deck you use.
Absolute time	New ones will be written.
End ID	The one written on the original tape will not be written.
Date function	The one written on the original tape will not be written.

When you use analog-to-analog connection, no sub codes on the original tape will be written onto a new tape. New codes will be written according to the DAT deck you use.

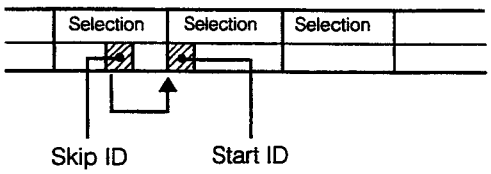
Start ID
This signal indicates the start of a music selection. You can locate the position of the start ID precisely. This signal should be written at the beginning of the selection.



Program number
This signal gives a number to selection. You can record it where the start ID is written. By designating this number, you can choose the desired selection directly or program selections in a desired order.



Skip ID
This signal can be marked on the selection wherever you wish. When the SKIP PLAY indicator is lit during playback, the deck will skip at high speed from where the skip ID is marked to the next start ID, and then playback will start again. Record this skip ID at the beginning of portion you want to skip.

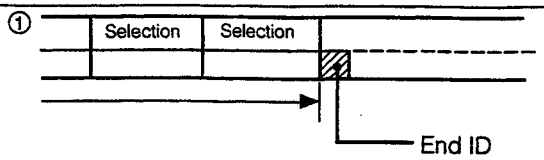


Note
In the following cases, the sub code function may not be performed correctly:
- The blank section is left on the tape.
- The beginning of the new tape is advanced with the ►► or ⊳ button.

Sub Codes

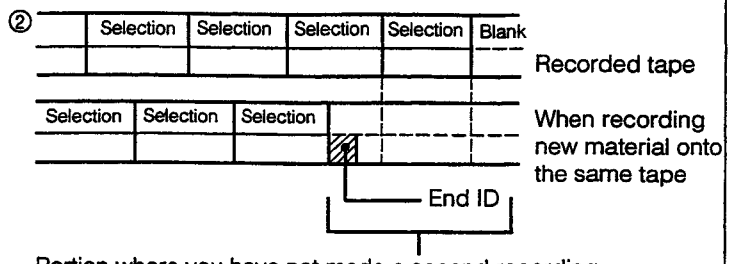
End ID
This signal indicates the end position of a recording.

① When you do not want to listen to the very end of a tape, record the end ID at the beginning of the portion you do not want to play.
When the end ID is detected during playback, playback stops and the tape is rewound to the beginning automatically.



During playback, the tape is automatically rewound to the beginning.

② When recording new material on a recorded tape, you can write an end ID at the end of the re-recorded portion. This will help you easily find the position to start recording the next time when you want to record other material onto the same tape.
Like a start ID or skip ID, end ID can also be erased later.



Portion where you have not made a second recording
(This first recording has not been erased.)

Absolute time
The absolute time indicates the position of the tape, giving the time elapsed from the beginning. The absolute time is recorded automatically at the same time the audio signal is recorded. It cannot be re-recorded. The absolute time allows you to confirm the elapsed time from the beginning of the tape.

Program time
This is the time elapsed for a selection.

The date function (Recording a date)
With the built-in clock, the day, the day of the week and time of recording are automatically recorded.

When using the sub codes

Functions that can be done	Required sub code(s)
Locating a selection (AMS function)	Start ID
Listening to the first portion of selections sequentially (Music Scan)	Start ID
Choosing a selection directly	Start ID/Program number
Programming desired selections in a desired order (RMS play)	Start ID/Program number
Skipping the portion not desired	Skip ID/Start ID
Looking for the position at which the recording or playback ends	End ID
Checking the recording date and time	Date (It is recorded automatically.)

Start ID

The start ID indicates the beginning of each selection. You can start playback from the start ID position. (See page 27 for details.)

There are three ways to write start ID:
- Writing automatically during recording
- Writing manually at the desired position during recording
- Writing manually at the desired position during playback

Note
While the start ID is being written, all buttons except the POWER switch, the ■ and the ▲OPEN/CLOSE buttons are not operative.

Writing Automatically during Recording

1 Make sure that the AUTO indicator is lit. If it is not, press the START ID AUTO button.
When turning on the power and inserting a cassette with its safety tab at the record-possible position, the AUTO indicator lights automatically.
In time recording, this indicator will be the same as the one before the power is turned off. Start IDs will be recorded automatically when the AUTO indicator lights.

2 To start recording, press the ●REC button, then press the ▮▮PAUSE or ▷ (play) button.
When the non-signal level lasts for more than 3 seconds and a selection then starts, the start ID is written for 9 seconds (18 seconds in the long-play mode).
While a start ID is being written, the START ID indicator flashes on the display.

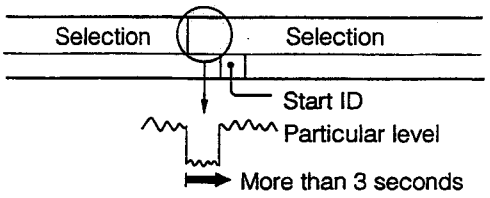
Why 9 seconds or 18 seconds are necessary for writing a start ID
A start ID requires 9 or 18 seconds to allow to be detected when rewinding/fast-forwarding a tape. (The speed is 200 times as fast as that of normal tape operation.)
After the start ID is located, the tape returns to the beginning of the start ID if necessary, and playback starts from the beginning of the selection.

If the signal level stays very low for more than 3 seconds
If there is a portion of very low volume level during a selection, a start ID may be written even in the middle of the selection. An unwanted start ID can be erased later. (page 30).

When the portion between selections is not clear
The start ID position may not coincide exactly to the beginning of the selection. To shift the start ID position, see "Shifting Start IDs' and Program Numbers Position" on page 32.

Note
When recording analog signal from the cassette deck or record player, the start ID may be written incorrectly because of the hiss noise* and ramble noise**. In this case, write start ID at the proper position, or erase the unwanted start ID afterward. (page 30)
* Hiss noise is high frequency hiss which is the particular noise form of analog cassette tape.
** Ramble noise is low frequency howl which is the particular noise form of analog record playback.

Illustration of writing a start ID



When recording from a CD player
If the auto space function is available with your CD player, activate this function to ensure that the start IDs are written correctly.

Start ID

Writing Manually during Recording

1 Make sure that the AUTO indicator is off. If it is not, press the START ID AUTO button to turn it off.

2 To start recording, press the ●REC button, then press the ▮▮PAUSE or ▷ (play) button.

3 At the desired position, press the START ID WRITE button.
The WRITE indicator lights.
The start ID is written for 9 seconds (18 seconds in the long-play mode) from the point where you pressed the START ID WRITE button. While a start ID is being written, the [START ID] indicator flashes.

Writing Manually during Playback (The Rehearsal Function)

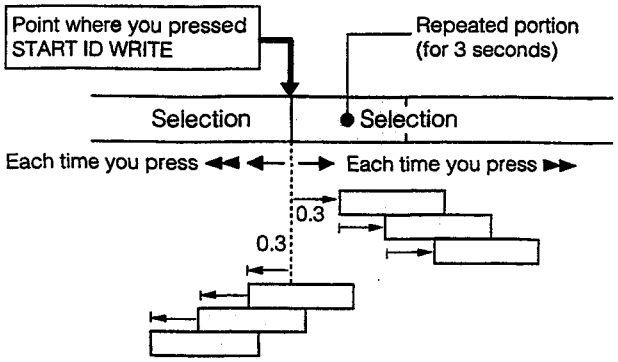
During playback, start ID can be written at the desired position more accurately than during recording.
Make sure that the safety tab of the cassette is closed.

1 Press the ▷ button to start playback. At the desired position, press the START ID WRITE button.
The [START ID] indicator lights and the WRITE indicator flashes, and the position for 3 seconds from the point where you pressed the START ID WRITE button, is played back repeatedly (Rehearsal function). The beginning of the repeated portion will be the beginning of the start ID.

2 Press the ◀◀ or ▶▶ button to adjust the "repeat start" point.
The "repeat start" point is shifted backward with the ◀◀ button or forward with the ▶▶ button by about 0.3 of a second.
It can be shifted up to 99 seconds backward or forward.

3 After setting the beginning of the start ID at the desired point, press the START ID WRITE button again.
The [START ID] indicator flashes and the WRITE indicator lights steadily and the start ID is written. However, the program number is not written.

Illustration of the rehearsal function



The repeated portion is played back 8 times, and the tape stops.

Adjusting the Position

To finely adjust the position of a start ID written automatically during recording, use the rehearsal function described on the left column.
You can shift the start ID position about 2 seconds (about 4 seconds in the long-play mode) backward or forward. To shift it for more than 2 seconds, first erase the start ID (see below) and rewrite it manually.

1 During playback, press the START ID WRITE button where the start ID to be shifted is written.

2 Perform steps 2 and 3 described on the left column, "Writing Manually during Playback."

Erasing

While the start ID you want to erase appears on the display during playback or in the stop mode, press the START ID ERASE button. (Make sure that the safety tab of the cassette is closed.)
That start ID is erased.
The [START ID] and ERASE indicators flash while the start ID is detected. While the start ID is being erased, the [START ID] and ERASE indicators light.

If you press the START ID ERASE button during the stop mode or while the [START ID] indicator is not on the display
The start ID just before the current position is erased.

When a start ID is erased
If a program number is also written with the start ID, both codes will be erased at the same time.

Program Numbers

Program numbers are the codes indicating the selection order. (See page 27 for details.)
There are two ways to write program numbers:

- Writing automatically during recording
- Renumbering automatically during playback or in the stop mode (Renumbering function)

Writing Automatically during Recording

When you proceed so that start IDs are written automatically during recording, the program numbers are also written.

Writing program numbers from the beginning of the tape

1 **The AUTO indicator must be lit. If it is not, press the START ID AUTO button.**
When turning on the power and inserting a cassette with its safety tab at the record-possible position, the AUTO indicator lights. In timer recording, the AUTO indicator will be the same as the one before the power is turned off.

2 **To start recording, press the ●REC button, then press the ▮▮PAUSE or ▷ (play) button.**
The program numbers will be written in numerical order from "1" at the same position as the start IDs.

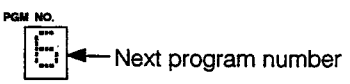
Writing program numbers from the middle of the tape

1 **To locate the last point of the previous recording, using the end search function. (page 25)**
It is important to proceed with the end search function in order not to leave a blank section on the tape.

2 **The AUTO indicator must be lit. If it is not, press the START ID AUTO button.**
When turning on the power and inserting a cassette with its safety tab at the record-possible position, the AUTO indicator lights.
In timer recording, the AUTO indicator will be the same as the one before the power is turned off.

3 **Press the ●REC button to set the deck in the record-pause mode.**

4 **Designate the next program number (the number that follows the program number of the last selection) with the numeric button.**
If you are not aware of the porgram number, press the ⏮ button to check the last program number (After checking the program number, locate the last point of the previous recording, using the end search function.)
If the program number of the last selection appears at the PGM NO. display, you need not to designate the next number.



← Next program number

5 **Press the ▮▮PAUSE or ▷ (play) button.**
The program numbers are written for about 9 seconds (about 18 seconds in the long-play mode) consecutively, beginning from the designated number.

If the next program number is not designated in step 4
The start IDs will be written, but the program numbers will not.
You can write the program numbers using the renumbering function described on the next page.

Program Numbers

Renumbering

If you record from the beginning to the middle of a tape on which another recording has ever been applied, the same program number may be written twice on that tape. If you omit designating the next program number when recording from the middle of the tape, the succeeding program numbers are not written.
In such cases, proceed as follows to renumber the program numbers from the beginning of the tape at a high speed.

Renumbering Program Numbers Automatically

1 Make sure that the AUTO indicator is lit, and that the safety tab of the cassette is at the record-possible position.
If the AUTO indicator is not lit, press the START ID AUTO button.

2 Press the RENUMBER button during playback or in the stop mode.
The tape will automatically be rewound to the beginning, and the program numbers are re-arranged from "1" in numerical order at each start ID position.
While the program numbers are rewritten, the START ID indicator flashes and while the tape is fast-forwarded to the next start ID, the RENUMBER indicator flashes.
When program numbers are written correctly, the tape is fast-forwarded to the next start ID.

When renumbering is terminated
The tape is automatically rewound to the beginning, and the deck enters stop mode.

Note
In the following cases, the renumbering function may not be performed correctly:
- The blank section is left on the tape.
- When the beginning of the new tape is advanced with the ►► or ▻ button.

Shifting Start IDs' and Program Numbers Position
The start ID position may not coincide exactly to the beginning of the selection, especially when the portion between selections is not clear. On such a tape, the very beginning of the selection cannot be located using the AMS function. If this happens, you can shift the start ID and program number position, however, you cannot shift the position of the program number 1.

1 Make sure that the AUTO indicator is off, and that the safety tab of the cassette is at the record-possible position.
If the AUTO indicator is lit, press the START ID AUTO button.

2 Press the RENUMBER button during playback or in the stop mode.
The start ID and program number position of the 2nd selection, and the succeeding selections, will be shifted forward by about 0.3 of a second.
When program numbers are written incorrectly, the renumber function operates.

Erasing

Make sure that the safety tab of the cassette is closed.

During playback, press the START ID ERASE button while the program number to be erased appears in the display window.
That program number is erased. The start ID at the same position will also be erased.
The START ID and ERASE indicators flash while the program number is being searched for, and the START ID and ERASE indicators light while the program number is being erased.

When the program number is erased
Playback continues. The succeeding program numbers remain unchanged. To re-arrange the program numbers, renumber them as described on the left column.

Skip ID

When the skip ID is detected during playback, the tape skips to the next start ID position, and the normal playback resumes. (See page 27 for details.)
The following operations can be performed only with the remote commander.

Writing during Recording

Press the SKIP ID WRITE button at the beginning of the portion you want to skip later.
The SKIP ID and WRITE indicators light momentarily.
The skip ID is written for about 1 second (2 seconds in the long-play mode) from where you pressed the button.

SKIP ID
WRITE

Writing during Playback (The Rehearsal Function)

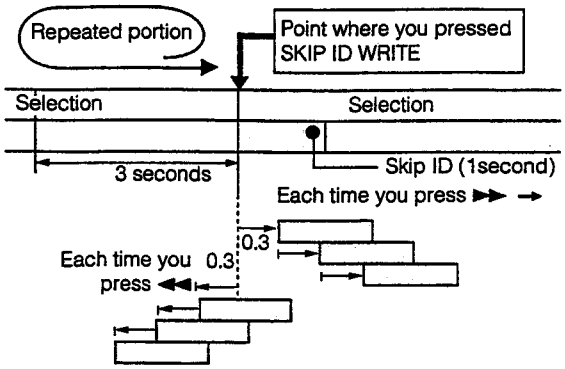
During playback, skip ID can be written at the desired position more accurately than during recording. Make sure that the safety tab of the cassette is closed.

1 During playback, press the SKIP ID WRITE button at the desired position.
The SKIP ID indicator lights and the WRITE indicator flashes, and the portion for 3 seconds to the point where you pressed the SKIP ID WRITE button, is played back repeatedly (Rehearsal function).
The end of the repeated portion will be the beginning of the skip ID.

2 Press the ◄◄ or ►► button to adjust the "repeat end" point.
The "repeat end" point is shifted backward with the ◄◄ button or forward with the ►► button, by 0.3 of a second. It can be shifted up to 99 seconds backward or forward.

3 After setting the beginning of the skip ID at the desired point, press the SKIP ID WRITE button again.
The SKIP ID indicator lights momentarily when the skip ID is being written.
The WRITE indicator goes off when the writing of the skip ID is finished.

Note on the point where a skip ID is written
During rehearsal function, a skip ID will be written at the end of the repeated portion as illustrated.



The repeated portion is played back 8 times, and the tape stops.

Erasing

Make sure that the safety tab of the cassette is closed.

During playback or in the stop mode, press the SKIP ID ERASE button immediately after the skip ID to be erased.
The tape is rewound to the nearest skip ID position and the skip ID is erased.
The SKIP ID and ERASE indicators flash while the skip ID is being searched for and light while the skip ID is being erased and go off when the skip ID is erased.

SKIP ID
ERASE

Precaution
When the skip ID and the start ID are overwritten, the skip ID will also be erased if the start ID is erased.

ID to be erased	Operation
Start ID, skip ID	Press the START ID ERASE button.
Skip ID	Press the SKIP ID ERASE button.

End ID

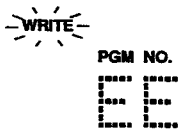
The end ID indicates the last position of the recording or playback. While recording on the same tape has been done several times, you can locate the point where the previous recording terminates quickly, using the end ID.
When the end ID is detected during playback, the playback stops and the tape is rewound to the beginning automatically.
The following operations can be performed only with the remote commander.

Writing during Recording

1 Press the ⏸ (pause) or ○ (record muting) button.

The button you pressed	The mode of the deck
⏸ (pause)	Record-pause mode
○ (record muting)	Record-pause mode after a sound muted portion is created for 4 seconds.

2 Press the END ID WRITE button.
The "EE" indicator appears at the PGM.NO display and the WRITE indicator flashes.



3 Press the ⏸ (pause) or ▷ (play) button to release the record-pause mode.
The WRITE indicator lights.
The end ID is written for about 9 seconds (18 seconds in the long-play mode). Tape returns to the beginning of the end ID after the end ID is written.

After you write an end ID
The portion after the end ID position cannot be played back. (The "EE" indicator appears at the PGM NO. display.) Erase the end ID (page 35) where you want to play back the portion after the end ID position.

Writing during Playback (The Rehearsal Function)

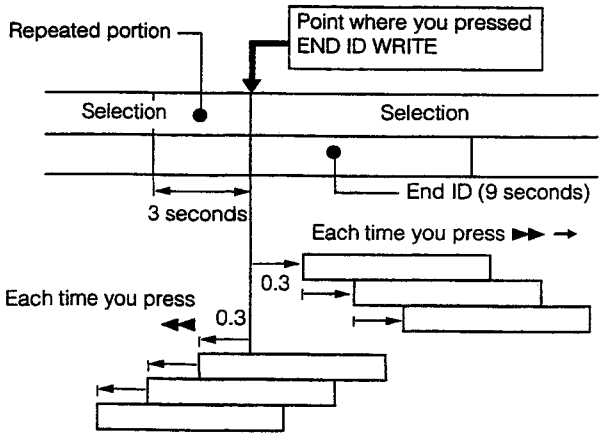
- During playback, no end ID can be written on a blank section.
- To write the end ID just before a blank section with the end search function, perform "Writing during Recording" described on the left columns.
- Make sure that the safety tab of the cassette is closed.

1 During playback, press END ID WRITE at the desired position.
The "EE" indicator appears at the PGM NO. display and the WRITE indicator flashes, and the portion for 3 seconds to the point where you pressed the END ID WRITE button, is played back repeatedly (Rehearsal function).
The end of the repeated portion will be the beginning of the end ID.

2 Press the ◀◀ or ▶▶ button to adjust the "repeat end" point.
The "repeat end point is shifted backward with the ◀◀ button or forward with the ▶▶ button, by 0.3 of a second. It can be shifted up to 99 seconds backward or forward.

3 After setting the beginning of the end ID at the desired point, press the END ID WRITE button again.
The "EE" and WRITE indicators light, and an end ID is written.

Note on the point where an end ID is written
During rehearsal function, an end ID is written at the end of the repeated portion as illustrated.



The repeated portion is played back 8 times, and the tape stops.

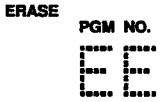
Playback

Erasing

Make sure that the safety tab of the cassette is closed.

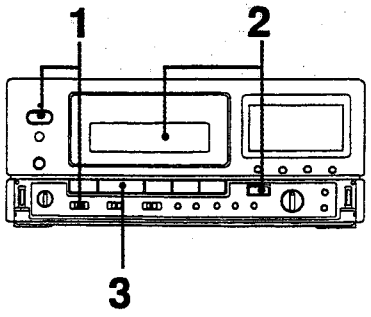
1 Search for the beginning of the end ID with the ►► button. (See page 25.)
When the end ID is detected, the "EE" indicator appears at the PGM NO. display.

2 Press the END ID ERASE button on the remote commander.
The ERASE indicator lights while the end ID is being erased and then goes off when the end ID is erased.
If you want to start recording from the point where the end ID is written, you need not press the END ID ERASE button.



Playing Back

This section describes about a basic playback operation.



1 Make sure that the TIMER switch is set to the OFF position, and then turn on the power.

2 Insert the cassette and press the ▲OPEN/CLOSE button to load the cassette.

3 Press the ▷ (play) button.
Playback begins.
If an end ID is written on the tape, playback stops automatically at the end ID position, and the tape will be rewound to the beginning.

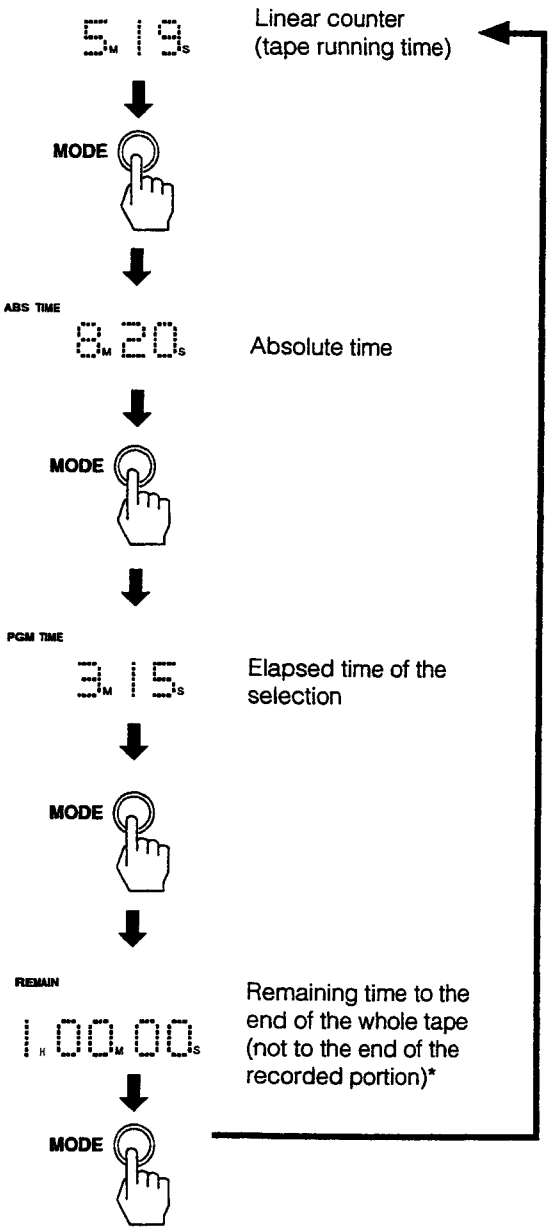
To stop playback
Press the ■ button.
To stop playback for a moment
Press the ▮▮PAUSE button.
To release pause and restart playback
Press the ▮▮PAUSE or ▷ button.
To remove the cassette
Press the ▲OPEN/CLOSE button.
To rewind or fast-forward the tape
Stop the tape and press the ◄◄ or ►► button.
To advance the tape (cue)
Press the ►► button during playback.
To rewind the tape (review)
Press the ◄◄ button during playback.
* Sound is heard while the ◄◄ or ►► button is pressed. Release ◄◄ or ►► the button at the desired point. Playback resumes.
The speed of the tape increases about 4 seconds after the cue or review starts.

To check the sampling frequency during playback
Press the ▷ button during playback. While the ▷ button is pressed, the sampling frequency being played back is indicated on the display.

Playback

Display Window

Each time you press COUNTER MODE, the counter changes as follows.



Notes

- At the beginning of the tape, "BB" may appear and immediately go off at the PGM NO. indicator position depending on some types of pre-recorded tapes. ("BB" stands for "beginning".)
- To reset the counter to 0M 00S, press RESET.

* When playing back a pre-recorded tape (software), remaining time to the end of the recorded portion appears.

Elapsed time of the selection does not appear when...

- The selection is played back from the middle.
- The tape is being fast-forwarded or rewound.
- The cassette compartment is opened or closed by the ⏏OPEN/CLOSE button.

Adjusting the headphones volume

Use the PHONE LEVEL control.

When the tape is played back to its end

The tape will be rewound to the beginning and stop automatically.

Remaining time does not appear in the following cases

- Immediately after the deck is set in the playback mode. The remaining time will appear about 16 seconds (in the standard-play mode) later.
- When playback is started from a blank section (page 21), the remaining time may not appear. Press the ◀◀ or ⏮ button.

Accuracy of the indicator for the remaining time

According to the kind of tape, the indicated time may differ slightly from the actual remaining time.

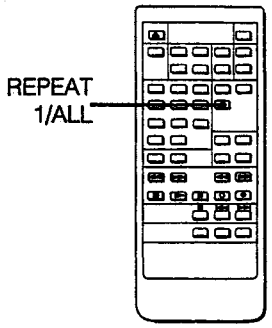
If tape noise exists, or sound quality has deteriorated

The head may be contaminated. Clean the head, using a cleaning cassette (See page 43).

Various Playback Operations

This section describes various playback operations which will make plaback operation easy.

Repeat Play



These operations can be performed only with the remote commander.

Playing a selection repeatedly

Press the REPEAT 1/ALL button while the desired selection is played back.
The REPEAT 1 indicator appears.
After the selection is playback, the tape is rewound to the beginning of that selection, and the playback is repeated.

To stop playing a selection repeatedly
Press the REPEAT 1/ALL button until the REPEAT indicator goes off.

Note on the end of the repeated portion during the REPEAT 1 play
The tape is rewound to the beginning of the selection to be repeated when one of the following is detected.
- Start ID of the next selection
- A blank section of more than 9 seconds
- End of the tape
- Skip ID with SKIP PLAY activated

Number of times to be repeated
The selection to be repeated will be played back 16 times, and then the tape will stop.

Playing all selections repeatedly

During playback, press the REPEAT 1/ALL button until the REPEAT indicator appears on the display.
After the tape is played back to the end, it is rewound to the beginning and the playback of all selections is repeated. In the RMS play (page 40), all the selections programmed are played back repeatedly.

To stop playing all selections repeatedly
Press the REPEAT 1/ALL button until the REPEAT indicator goes off.

Note on the end of the repeated portion during the REPEAT ALL play
The tape is rewound to the beginning of the tape when one of the following is detected.
- End ID
- A blank section of more than 9 seconds

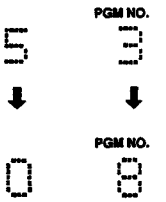
Automatic Music Sensor Operation

When you press the ⏮ or ⏭ button during playback, playback will start from the beginning of the desired selection.
When it is pressed in the pause mode, the deck enters the pause mode at the beginning of the designated selection. Press the ⏸PAUSE or ▷ button to resume playback.
For this operation, the start ID codes must be written on the tape.
For how to write the start ID, see page 29.

To locate the selection ahead
Press the ⏭ button. Each pressing advances the tape to the next selection in sequence.

Example: To designate five selections ahead, press the ⏭ button five times.

The number of time you pressed ⏭ is displayed.

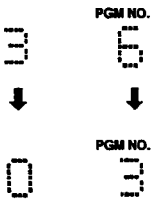


When the designated selection is located, playback resumes. The display returns to the counter display.

To locate the previous selection
Press the ⏮ button. Each pressing moves the tape to the previous selection in sequence.

Example: To designate three selection back (excluding the selection being played), press the ⏮ button four times.

The number of time you pressed ⏮ is displayed.



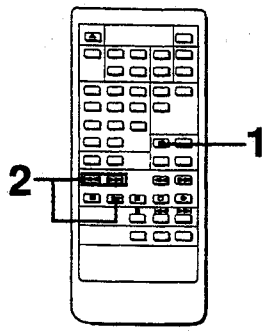
When the designated selection is located, playback resumes. The display returns to the counter display.

When designating the selection being played back, "-0" appears.
You can designate a selection by pressing the numeric buttons on the remote commander, instead of pressing the ⏮ or ⏭ button several times. In this case, press the ⏮ or ⏭ button after pressing the numeric buttons.

Various Playback Operations

Music Scan

The following operations can be performed only with the remote commander.



For this operation, the start ID codes must be written on the tape. For how to write the start ID codes, see page 29.

1 During stop mode, press the MUSIC SCAN button.
"M. SCAN" flashes for about 8 seconds.
During flashing, press the ▷ button.

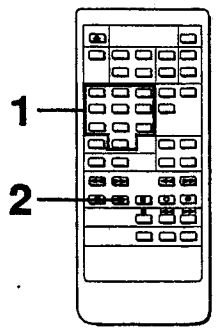
2 Press the ▷ (play) button.
The tape is rewound to the beginning, the first part of each selection (start ID position) is played back for about 8 seconds.
The counter display appears on the display during playback.

When you press the ▷▷| button instead of the ▷ (play) button
The nearest start ID after the current position is detected, and, after playing back the first part of that selection for about 8 seconds, the next start ID in the forward direction is located.
This operation continues until the end of the tape.
When you press the |◁◁ button instead of the ▷ (play) button
The nearest start ID before the current position is detected, and, after playing back the first part of that selection for about 8 seconds, the next start ID in the reverse direction is located.
This operation continues until the top of the tape.

To listen to the beginning of a selection for more than 8 seconds
Press the ▷ (play) button while the selection you want to listen to is played back.
While pressing the ▷ button, the playback of that selection continues.

To listen to an entire selection
Press the MUSIC SCAN button while the selection you want to listen to is played back. "M.S OFF" appears on the dispaly for about one second.
The music scan function is released, and the playback of that selection continues.

Designating the Desired Selection

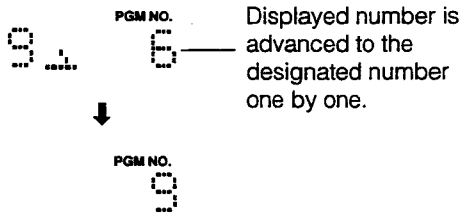


For this operation, the selections must be numbered by the program numbers. The program numbers are written at the same position as the start ID codes. For how to write the program number, see page 31.

This operation can be performed only with the remote commander.

1 Designate the desired program number with the numeric button(s)*.

2 Press ▷ (play).
The designated selection is searched for at high speed and playback starts from the beginning of that selection.



When the designated number is indicated at the PGM NO. display, the PGM NO. display flashes and goes off and then the counter display appears on the display.

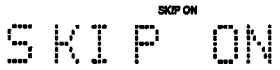
* When you press the numeric button(s) during play-pause mode, the deck enters the pause mode at the beginning of the designated selection. Press the ▮▮PAUSE or ▷ button to resume playback.

If an incorrect number is designated
Before pressing the ▷ button, press the CLEAR button.
The displayed program number will be cleared.
Then designate the correct program number.
Once the ▷ button is pressed, it is impossible to cancel the designated selection.

Skip Play

For this operation, the skip ID code(s) must be written on the tape.
This operation can be performed only with the remote commander.

Press the SKIP PLAY button.
The SKIP ON indicator lights and at the same time, "SKIP ON" appears for about a second on the display.
During playback, the tape skips to the next start ID position automatically when a skip ID is detected, and the playback resumes.



To stop skip play
Press the SKIP PLAY button to turn off the SKIP ON indicator and at the same time, "SKIP OFF" appears for about one second on the display.

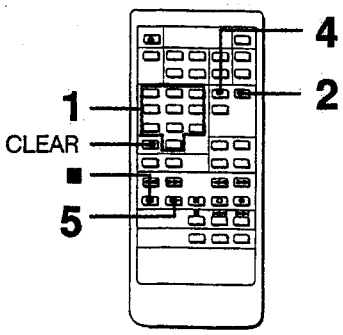
Auto Play: Restarting Playback after Rewinding

While pressing ◀◀, press ▷.
With the ▷ indicator flashing, the tape is rewound to the beginning, and playback starts automatically.

* If the above operation is done immediately after the cassette is inserted, the auto play operation does not function. Press ▷ a few seconds after ◀◀ is pressed.

Various Playback Operations

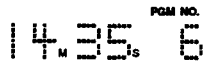
Random Music Sensor (RMS) Operation

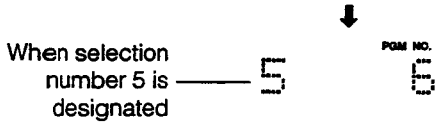


*RMS = Random Music Sensor
The RMS function allows you to program the desired selections in the desired order.
For the operation, program numbers must be written on the tape.

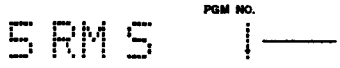
This operation can be performed only with the remote commander.

1 Designate the desired selection by pressing the numeric button(s) during the stop mode.
The selection numbers can be specified from 1 to 99.



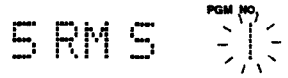


2 Press the ENTER button.

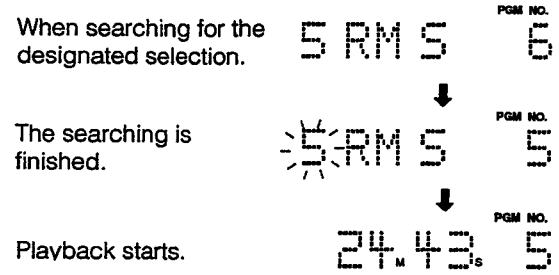


3 Repeat step 1 and 2.
A maximum of 60 selections can be programmed.

4 To check the programmed selections, press the CHECK button.
Each time you press the CHECK button, the programmed selections appear in the designated order.



5 Press the ▷ (play) button.
The programmed selections are played back in the designated order.



To stop RMS play
Press the ■ button.

To add a selection to the program
Once the RMS play starts, you cannot add a selection. To add a selection, first stop the RMS play, and program new selection(s) by following the procedure described on the left column.

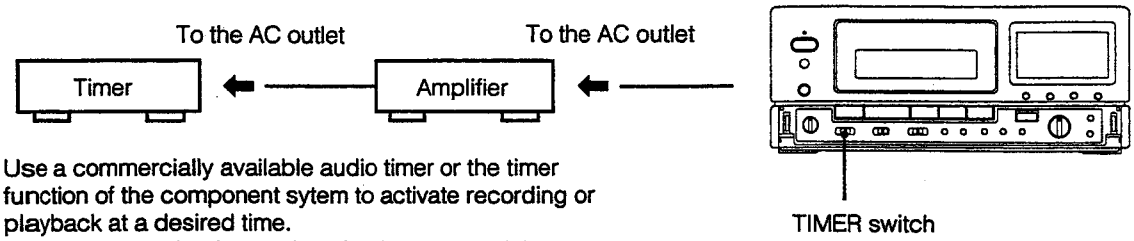
To delete the selection you programmed last
Press the CLEAR button.
However, when checking the programmed selection, the CLEAR button cannot be used.

To cancel the entire program
In the stop mode: Press the ■ button once.
In the RMS play mode: Press the ■ button twice.

Timer Activated Operation

This section describes about the timer operation. With this function, playback at the designated time is available and recording can be performed when you are absent.
By connecting this unit to the component system described on pages 10 and 11, the timer recording and timer playback are available.

Timer Activated Recording



Use a commercially available audio timer or the timer function of the component sytem to activate recording or playback at a desired time.
Read the operating instructions for the timer and the component system.

When using a commercially available audio timer.

1 Turn on the timer.

2 Turn on the DAT deck, and prepare for recording. (Follow steps 2, 3 and 5 on page 22.)

3 Set the timer to the desired time.
Power to the amplifier and to the DAT deck is turned off. Leave the power switches of the equipment turned on.

4 Set the TIMER switch to the REC position.
At the preset time, the power is supplied and recording starts after about 4 seconds.
The AUTO indicator will be the same as the one before the power of the DAT deck is turned off.
When the AUTO indicator lights, start IDs will be written during recording.

When timer activated recording is finished
Be sure to set the TIMER switch to the OFF position.

Precautions
- If the TIMER switch is left at the REC position, recording will start when the power is turned on the next time, and the tape contents will be erased.
- In timer recording (the TIMER switch is set to the REC position), the auto rewind function will not be activated even if the tape is fully taken up. The tape stops without being rewound so that recording will not be performed over the previously recorded material.
- Be sure to activate timer recording with the cassette inserted properly in the cassette compartment. With the cassette compartment lid opened, timer recording will not function.

When using a timer function of the component system

- Make sure that the AU BUS jack of this unit is connected to the AU BUS jack of the component system.
- When operating the component system, refer to the instructions manual of each component.

1 Set the TIMER switch of the DAT deck to the REC position.

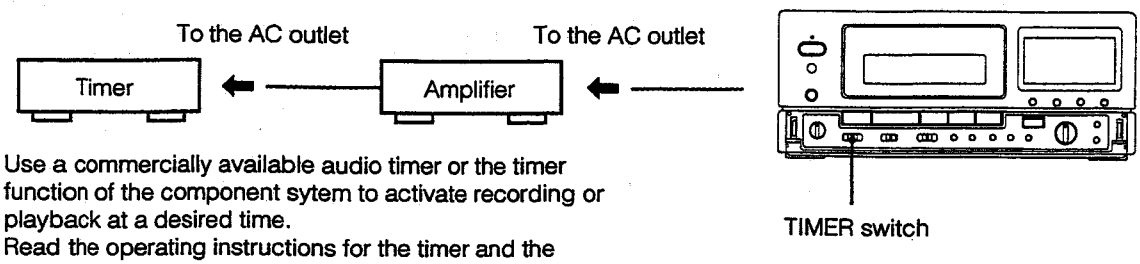
2 Set the timer of the component system to the desired time.

3 Select the program source to be recorded on the component system.

Note
This unit will function after about 4 seconds from the designated time. Therefore, designate the time about one minute before the desired time for a complete recording.

Timer Activated Operation

Timer Activated Playback



Use a commercially available audio timer or the timer function of the component sytem to activate recording or playback at a desired time.
Read the operating instructions for the timer and the component system.

When using a commercially available audio timer.

1 **Turn on the timer.**

2 **Turn on the DAT deck, and insert the cassette.**

3 **Set the timer to the desired time.**
Power to the amplifier and to the DAT deck is turned off. Leave the power switches of the equipment turned on.

4 **Set the TIMER switch to the PLAY position.**
At the preset time, the power is supplied and playback starts after about 4 seconds.

When timer activated playback is finished
Normally set the TIMER switch to the OFF position.
If you want to start playback at the preset time every day automatically, leave the TIMER switch to the PLAY position.

Note
The built-in clock can be used only for the date function.
To record and playback at a desired time, use a commercially available timer or the timer of the component system.

When using a timer function of the component system

1 **Set the TIMER switch to the PLAY position.**

2 **Set the timer of the component system to the desired time.**

3 **Select the CD or TAPE mode of timer function.**
Do not leave a CD or cassette tape in the component. Otherwise, the sound of the CD or cassette tape may leak temporarily at the preset time. However, DAT playback starts immediately after that.

Maintenance

This section describes about the maintenance of this unit and it will make helpful for a long use of this unit.

Cleaning the Cabinet

Clean the cabinet, panels and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive and, scouring powder or solvent such as alcohol or benzine.

Cleaning the Head

Prolonged operation will cause contamination of the head. To make the best possible recording and playback, we recommend cleaning the head periodically, using the DT-10CL cleaning cassette (not supplied).

How to use the cleaning cassette

1 Insert the cleaning cassette as you insert a normal DAT cassette.
2 Press ▷. Press ■ after about 10 seconds.
3 Remove the cleaning cassette without rewinding it.
4 Proceed with recording and playback with a normal DAT cassette and check the sound quality.

Notes on the cleaning cassette

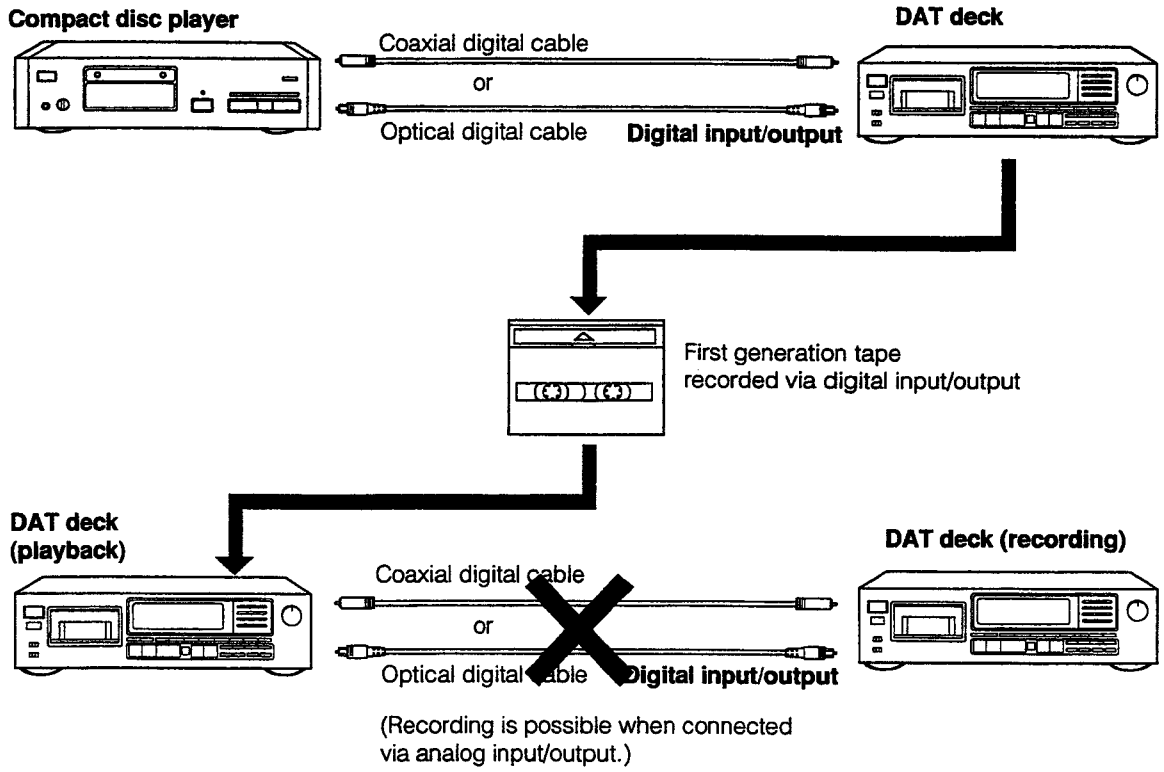
- The cleaning cassette cannot be used for recording and playback.
- Do not clean the head with the cleaning cassette more than five times over a short period.
  Cleaning the head continuously for a too long period of time may cause wear to the head.
- Do not rewind the cleaning cassette each time you use it. When the cleaning cassette tape is taken up completely, rewind it to the beginning and re-use it. The cleaning cassette can be used two hundred times, with 10 seconds of cleaning each time.

Guide to the Serial Copy Management System

This digital audio tape deck adopts the Serial Copy Management System. This system enables one generation of digital recording of prerecorded software via digital input/output. A summary of this system is as follows:

1

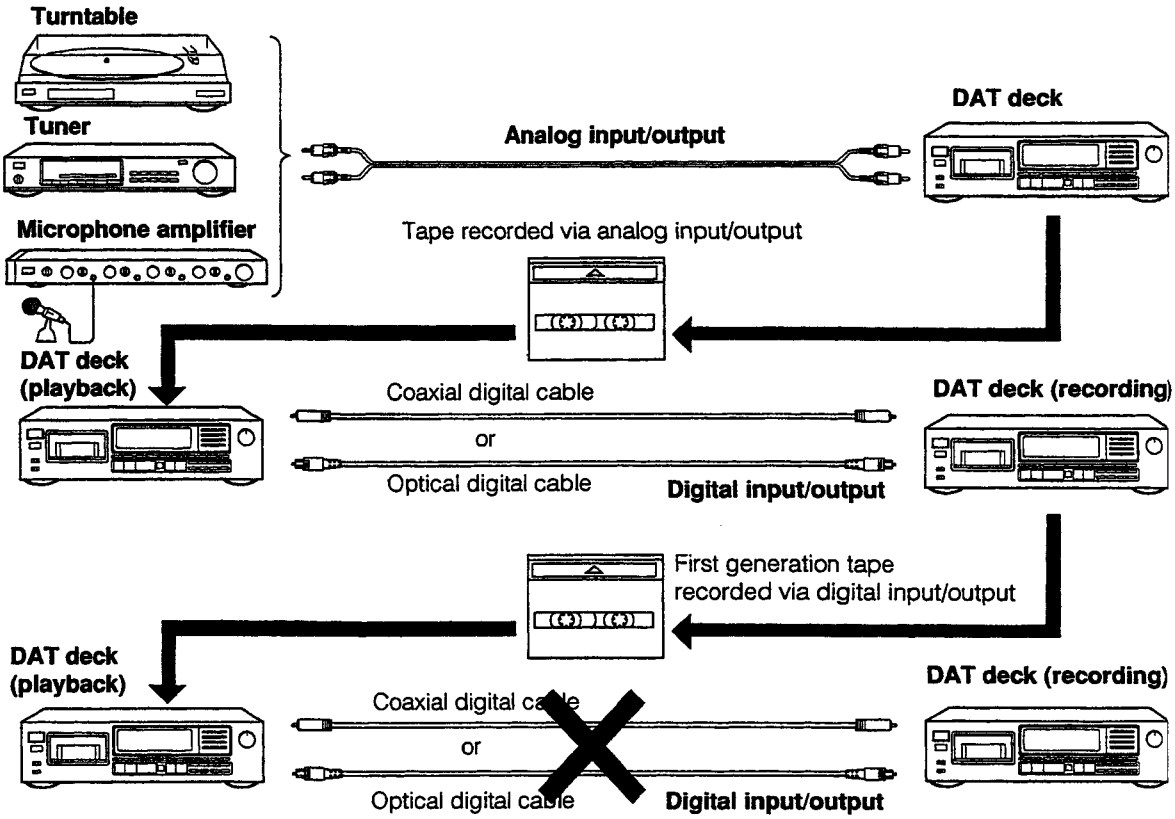
You can record a compact disc to a digital audio tape via digital input/output. But you cannot record the recorded tape to another via digital input/output.



(Recording is possible when connected via analog input/output.)

2

You can record a digital audio tape recorded via analog input/output to another via digital input/output. But, you cannot make a second generation tape via digital input/output.



(Recording is possible when connected via analog input/output.)

Remarks

There are no restrictions for generation when DAT decks are connected via analog input/output each other.
These rules does not apply when you use a DAT deck which does not adopt the Serial Copy Management System.

Troubleshooting

	Symptom	Cause	Remedy
Basic operation	**The tape is ejected after being loaded.**	The cassette is inserted incorrectly.	Insert the cassette correctly. (page 20)
	The tape does not move.	For 4 seconds after the power is turned on, the buttons do not function.	Wait until the blinking of the ▮▮ indicator goes off and then try again.
		The ▮▮PAUSE button is activated. (The ▮▮ indicator lights.)	Press the ▮▮PAUSE button to release pause.
		The tape is wound completely.	Press the ◀◀ or I◁◁ button to rewind.
	The sound is not heard.	Incorrect connections.	Connect properly. (pages 8 to 11)
		Incorrect operation of the connected amplifier.	Operate the amplifier as required by the deck operation. (Refer to the operating instructions of the amplifier.)
	Recording cannot be made.	The safety tab of the cassette is open.	Close the tab of the cassette. (page 20)
		Incorrect position of the INPUT selector.	Set the INPUT selector correctly. Set it to the DIGITAL position to record sound from the equipment connected to the DIGITAL IN 1 or DIGITAL IN 2 jacks. Set it to the ANALOG position to record sound from the equipment connected to the LINE IN jacks.
		The digital copy prohibit signal exists in the source signal input to the digital input jack.	Connect the source equipment to the LINE IN jacks.
	The sound is not heard from the recorded tape.	When recording analog input signals, the recording level is turned down completely. (When recording the analog input signal)	Adjust the recording level by using the REC LEVEL control. (page 24)
	The CAUTION indicator lights, and no button does function.	Moisture condenses inside the unit.	Leave the unit as is, then turn on the power. (page 4)
		Defective or damaged cassette is inserted.	Remove the cassette.
		The cassette is removed forcibly from the cassette compartment.	Turn off the unit and then turn on again.
	Sub code cannot be written.	The safety tab of the cassette is open.	Close the tab of the cassette. (page 20)
	Start ID cannot be written during recording.	A new start ID cannot be written within 9 seconds (18 seconds in the long-play mode) from the end of another start ID.	Leave at least 9 seconds (18 seconds in the long-play mode) from the end of another start ID.

	Symptom	Cause	Remedy
Sub code operation	**Search function does not operate during playback.**	The start ID is not written correctly.	Erase it (page 30), and then write it again.
		The portion between the end of a start ID and the beginning of the following start ID is less than 9 seconds (18 seconds in the long-play mode) long.	When writing the start IDs manually, write so that the intervals between them are more than 9 seconds (18 seconds in the long-play mode.)
		The selected program number does not exist on the tape.	Use the RENUMBER button to re-arrange the program numbers. (page 32)
		The program numbers are out of order.	
	Search function operates suddenly during playback.	The skip play function is operating. (The SKIP ON indicator lights in the display window.)	Turn off the indicator by pressing SKIP PLAY.
		The repeat play function is operating.	Turn off the indicator by pressing REPEAT 1/ALL.
	Search function stops.	There is a blank section between selections. (The sampling frequency indicator blinks on the display window.)	Use the end search function (page 25) when recording so that no blank is created.
	The tape operation buttons do not operate while writing the start ID.	While writing the start ID (9 seconds or 18 seconds), none of the buttons except the ■ and ⏏OPEN/CLOSE buttons operate.	Operate after the start ID is written.
	The absolute time codes cannot be written.	Recording was started from the blank section.	Rewind the tape to the beginning, or locate the very last point of the previous recording, using the end search function (page 25), and start recording from the point.
	End ID cannot be written during playback.	The portion where you want to write the end ID is blank.	Set the deck in the record-pause mode by pressing ●REC, then write the end ID.
	Renumbering function does not operate.	The portion between the end of a start ID and the beginning of the following start ID is less than 9 seconds (18 seconds in the long-play mode) long.	When writing the start IDs manually, write so that the intervals between them are more than 9 seconds (18 seconds in the long-play mode).
	Start ID cannot be erased.		
	Skip ID cannot be erased.	Two skip IDs are written continuously.	When writing the skip IDs, write so that the intervals between them are more than 1 second (2 seconds in the long-play mode).
	End ID cannot be erased.	The end ID is written at the beginning of the tape.	Start recording from the beginning of the tape.
		The end ID is written immediately after a start ID.	First erase the start ID.

Troubleshooting

	Symptom	Cause	Remedy
System function	**The timer function with the component system cannot be performed.**	The AU BUS cord is disconnected.	Connect the AU BUS cord to the each AU BUS jacks of the component system and this unit.
	The component system does not select the DAT mode when this unit enters playback mode.	The AU BUS cord is disconnected.	Connect the AU BUS cord to the each AU BUS jacks of the component system and this unit.
	The remote commander does not function even when the remote commander is pointed to the remote sensor of this unit.	When this unit is connected to the component system with the AU BUS cord and the power of the component system is turned on, only the remote sensor on the component system can function.	Point the remote commander to the remote sensor on the component system.
Others	**Tape transport noise seems excessively loud in rewind or fastforward mode.**	This situation depends upon the cassette being used and is not a problem.	—
	The tape stops running suddenly.	A defective or damaged cassette has been inserted.	Press the ⏏OPEN/CLOSE button to change the tape.
	Increase of noise or deterioration of sound quality.	Contamination of the head.	Clean the head, using the cleaning tape. (page 43)
	The clock for the date function does not operate once the power is off.	The battery built in this unit is weak.	Ask the Sony dealer to change the battery.

Specifications

Tape	Digital audio tape
Recording head	Rotary head
Recording time	Standard: 120 minutes. Long-play mode: 240 minutes (with DT-120)
Tape speed	Standard: 8.15 mm/s, Long play mode: 4.075 mm/s
Drum rotation	Standard: 2,000 rpm, Long-play mode: 1,000 rpm
Error correction	Double Read Solomon code

Tape

Track pitch	13.6 µm (20.4 µm)
Sampling frequency	48 kHz, 44.1 kHz, 32 kHz
Modulation system	8–10 Modulation
Transfer rate	2.46 Mbit/sec.
Number of channel	2 channels, stereo
D/A conversion (Quantization)	
	Standard: 16-bit linear
	Long-play mode: 12-bit non-linear
Frequency response	Standard: 2–22,000 Hz (±0.5 dB)
	Long-play mode: 2–14,500 Hz (±0.5 dB)
Signal to noise ratio	Standard: more than 88 dB
	Long-play mode: more than 88 dB
Dynamic range	Standard: more than 88 dB
	Long-play mode: more than 88 dB
Total harmonic distortion	Standard: less than 0.0065% (1 kHz)
	Long-play mode: less than 0.08% (1 kHz)
Wow and flutter	Below measurable limit (±0.001% W. PEAK)

Input

	Jack type	Impedance	Rated input level
LINE IN	phono jack	47 kohms	–4 dBs
DIGITAL IN	phono jack	75 ohms	0.5 Vp-p, 20%
DIGITAL IN	optical jack	—	—

Output

	Jack type	Impedance	Rated output	Load impedance
LINE OUT	phono jack	470 ohms	–4 dBs	More than 10 kohms
PHONES	stereo phone jack	220 ohms	0.6 mW	32 ohms

DIGITAL OUT (optical jack): wavelength 660 nm

General

Power requirements	220 - 230 V AC, 50/60 Hz 240 V AC, 50 Hz (U.K model)
Power consumption	24 W
Dimensions	Approx. 225 x 95 x 220 mm (w/h/d) (17 x 5 x 13 7/8 inches)
Weight	Approx. 3 kg (6 lb 10 oz)

Remote commander (supplied)

Remote control system	Infrared control
Power requirements	3V DC, with two size AA (R6) batteries
Dimensions	Approx. 63 x 19 x 175 mm (w/h/d) (2 1/2 x 3/4 x 7 inches)
Weight	Approx. 130 g (4 oz) incl. batteries.

Supplied accessories

Sony batteries SUM-3(NS) (2)
Audio connecting cords (2 phono plugs - 2 phono plugs, stereo for line inputs and outputs) (2)
AU BUS cord (1)

Design and specifications subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

Accessories not supplied

Optical cable	POC-15, etc.
Connecting cord	RK-C77 (2 phono plugs - 2 phono plugs:connectors plated with gold, high quality litz line cord) VMC-1ES, 3ES, etc. (phono plug - phono plug): for digital connection
Cleaning cassette	DT-10CL

The component system recommended

MHC-3600
MHC-2600
MHC-6600
MHC-5600